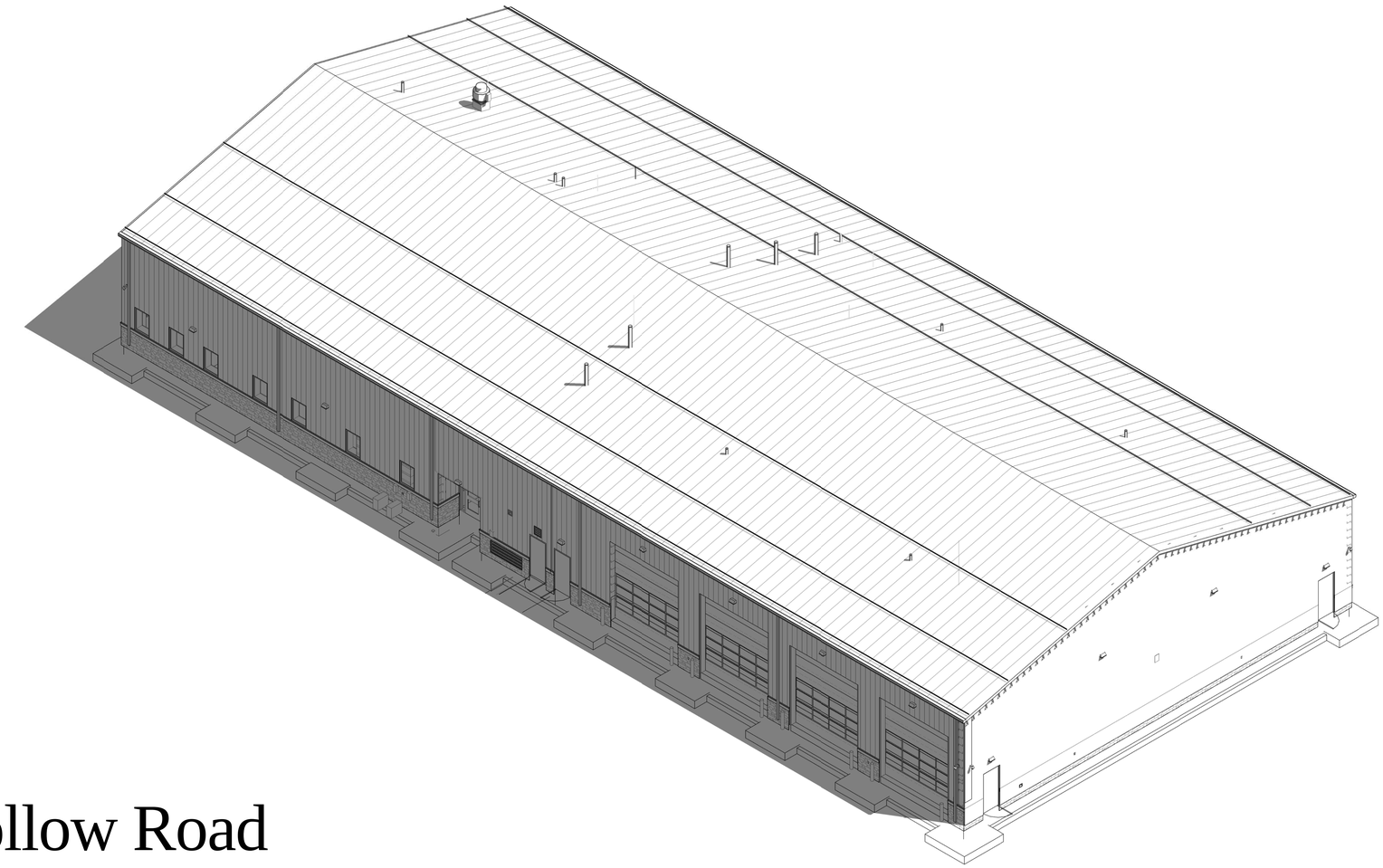
Town of North Stonington
New Center for Emergency Services



25 Rocky Hollow Road
North Stonington, Connecticut 06359

REV 2 - Issued for Bidding - 02/10/17

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers

3190 Whitney Avenue, Hamden, CT 06518-2340
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

100% Construction Documents

DECEMBER 1, 2016

A0.0

ABBREVIATIONS

A.B.	ANCHOR BOLT
A.C.P.	ASBESTOS CEMENT PIPE
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
A.C.T.	ACOUSTICAL CEILING TILE
ALUM.	ALUMINUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT
AVG.	AVERAGE
BSMT.	BASEMENT
BD.	BOARD
BRG.	BEARING
BRK.	BRICK
BIT.	BITUMINOUS
BLK.	BLOCK
BLDG.	BUILDING
B.S.	BOTH SIDES
C.I.	CAST IRON
C.I.P.	CAST IN PLACE CONCRETE
C.B.	CATCH BASIN
C.B.R.	CATCH BASIN TO BE REMOVED
CLG.	CEILING
℄	CENTER LINE
C. BD.	CHALK BOARD
C.C.	CURB CUT
C.O.	CLEAN OUT
COL.	COLUMN
CONC.	CONCRETE
CONF.	CONFERENCE
C.M.U.	CONCRETE MASONRY UNIT
CONT.	CONTINUOUS, CONTINUE
C.J.	CONTROL JOINT/CONSTRUCTION JOINT
CONTR.	CONTRACTOR
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DR.	DOOR
DN.	DOWN
DWG.	DRAWING
E	ELECTRICAL
EA.	EACH
EXTR.	EXISTING CEILING TO REMAIN
ED.	EDUCATION
ELEC.	ELECTRICAL
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEV.	ELEVATION
EMER.	EMERGENCY
ENCL.	ENCLOSURE
ENL.	ENLARGED
ENT.	ENTRANCE
EP.	EPOXY PAINT
EQ.	EQUAL
ES.	EXPOSED STRUCTURE
E.T.R.	EXISTING TO REMAIN
E.W.	EACH WAY
E.W./E.F.	EACH WAY/EACH FACE
EXAM.	EXAMINATION
EXIST	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
FDN.	FOUNDATION
F.F.	FINISHED FLOOR
F.P.	FOLDING PARTITION
FIN.	FINISH, FINISHED
FIXT.	FIXTURE
FL.	FLOOR
FT.	FOOT
F.S.	FAR SIDE
FTG.	FOOTING
G	GAS
GA.	GAGE, GAUGE
GEN.	GENERAL
G.C.	GENERAL CONTRACTOR
GYP.	GYPSUM
GYP. BD.	GYPSUM BOARD
H.C.	HANDICAPPED
HD.	HEADED
HDWE.	HARDWARE
HGT.	HEIGHT
H.P.	HIGH POINT
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL, HORIZONTALLY
H.B.	HOSE BIBB
HR.	HOUR
HYD.	HYDRANT
INSUL.	INSULATION, INSULATED
INT.	INTERIOR
INV.	INVERT
JAN.	JANITOR
K.P.	KICK PLATE
LAM.	LAMINATE
L.F.	LINEAL FOOT
LG.	LONG
LOC.	LOCATION
L.P.	LOW POINT
LTG.	LIGHTING
M	MINUTE
MAS.	MASONRY
MAX.	MAXIMUM
MECH.	MECHANICAL
M.H.	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MTD.	MOUNTED
N.A.	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.C.C.	OCCUPANT
O.D.	OUTSIDE DIAMETER
OPNG.	OPENING
P.C.B.	PAINTED CONCRETE BLOCK
P.G.B.	PAINTED GYPSUM BOARD
PL.	PLATE
PLUMB.	PLUMBING
PLYWD.	PLYWOOD
PREP.	PREPARATION
P.T.	PRESSURE TREATED
PTD.	PAINTED
P.V.C.	POLYVINYL CHLORIDE
R.	RISER
RAD.	RADIUS
R.C.P.	REINFORCED CONCRETE PIPE
R.D.	ROOF DRAIN
REINF.	REINFORCEMENT
REQD.	REQUIRED
R.H.	ROOF HATCH
R.L.	ROOF LEADER
RM.	ROOM
S.	STORM
SAN.	SANITARY
S.C.	SEALED CONCRETE
SCHED.	SCHEDULE
SECT.	SECTION
S.F.	STEP FOOTING
SIM.	SIMILAR
S.O.G.	SLAB ON GRADE
SPEC.	SPECIFICATIONS
SQ.	SQUARE
SQ. FT.	SQUARE FEET
STL.	STEEL
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED, SUSPENSION
S.W.	SHEAR WALL
S.W.F.	SHEAR WALL FOOTING
T.	TELEPHONE
T&B	TOP & BOTTOM
TECH.	TECHNOLOGY
T.O.	TOP OF
T.O.F.	TOP OF FRAME
T.O.S.	TOP OF STEEL
T/S	TOP OF SLAB
T.W.	TOP OF WALL
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
V.B.	VINYL BASE
V.C.T.	VINYL COMPOSITE TILE
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
W.	WATER
W/	WITH
WCJ	WALL CONTROL JOINT
WD.	WOOD
WF.	WIDE FLANGE
W.W.F.	WELDED WIRE FABRIC
W.W.M.	WELDED WIRE MESH
@	AT
℄	DIAMETER

SYMBOL LEGEND

ROOM NUMBER

DOOR NUMBER

WINDOW NUMBER

DETAIL NUMBER / DRAWING NUMBER

CONSTRUCTION NOTE

SECTION / DETAIL DRAWING NUMBER

WALL SECTION DRAWING NUMBER

INTERIOR / EXTERIOR ELEVATION DRAWING NUMBER

REFERENCE POINT

WALL TYPE

REVISION MARK

GRAPHIC LEGEND

CONCRETE

CONCRETE MASONRY UNITS

BRICK

STONE

METALS

COMPACTED GRAVEL

EARTH

PLYWOOD

ACOUSTICAL TILE

WOOD FRAMING - THROUGH MEMBER

WOOD FRAMING - INTERRUPTED MEMBER

FINISHED WOOD

BATT INSULATION

RIGID INSULATION

GYPSUM BOARD

GENERAL NOTES

1. CONTRACTOR SHALLI FIELD VERIFY ALL EXISTING CONDITIONS & DIMENSIONS PRIOR TO FABRICATION, FURNISHING AND INSTALLATION OF ANY MATERIALS, EQUIPMENT AND WORK.
2. ALL MATERIALS & EQUIPMENT SHOWN ARE NEW TO BE PROVIDED BY CONTRACTOR UNLESS OTHERWISE NOTED.
3. ALL EXISTING UTILITIES & EQUIPMENT LOCATIONS ARE APPROXIMATE - CONTRACTOR SHALL FIELD VERIFYAND/OR COORDINATE EXACT LOCATIONS.
4. CONTRACTOR ASSUMES ALL RESPONSIBILITY DURING CONSTRUCTION TO PROTECT MATERIALS AND EQUIPMENT. ANY & ALL DAMAGED ITEMS & EQUIPMENT DURING CONSTRUCTION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
5. ALL RATED DOORS & DOORS FRONTING A CORRIDOR SHALL HAVE POSITIVE LATCHING LOCKSETS UNLESS OTHERWISE INDICATED ON THE DOOR SCHEDULE.
6. AII DOORS LEADING TO HAZARDOUS AREAS SHALL HAVE TACTILE WARNING.
7. ALL DOORS EXITING 100 PERSONS OR MORE SHALL HAVE PANIC EXIT DEVICES.
8. ALL HANDICAP ACCESSIBLE DOOR HARDWARE SHALL BE PROVIDED TO COMPLY WITH ADA, ANSI AND ALL OTHER APPLICABLE CODES.
9. ALL NEW EXPOSED/VISIBLE DECKING, BEAMS, COLUMNS, JOISTS AND OTHER STRUCTURAL COMPONENTS SHALL BE PAINTED UNLESS OTHERWISE NOTED.
10. IF A NOTE IS FOUND ON ARCHITECTURAL DRAWINGS READING - 'SEE STRUCTURAL DRAWINGS' - AND SIZE AND DETAILING OF MEMBER(S) IS NOT FOUND, THE CONTRACTOR SHALL CONTACT THE ARCHITECT TO REQUEST MISSING INFORMATION. THESE ITEMS SHALL BE PART OF THE BASE BID AND STEEL SUBCONTRACTOR SHALL REVIEW STRUCTURAL AS WELL AS ARCHITECTURAL DRAWINGS PRIOR TO BIDDING.
11. ALL CONTRACTORS SHALL REVIEW DRAWINGS AND PROJECT MANUAL. IF THERE IS A DISCREPANCY BETWEEN THE TWO OR ANY OTHER PARTS OF THE DOCUMENTS, THE HIGHER VALUE (IN DOLLARS) SHALL PREVAIL AS THE SCOPE OF WORK THAT WILL BE PRICED UNLESS OTHERWISE DIRECTED IN WRITING BY THE ARCHITECT DURING THE BIDDING PERIOD.

LIST OF DRAWINGS

GENERAL INFORMATION DRAWINGS

A0.0	COVER SHEET
A0.1	GENERAL INFORMATION AND DRAWINGS LIST
A0.2	CODE PLANS & INFORMATION

CIVIL DRAWINGS

C1	SITE PLAN
C2	EXISTING CONDITIONS & DEMOLITION PLAN
C3	GRADING, UTILITY & EROSION CONTROL PLAN
C4	SEPTIC SYSTEM DETAILS
C5	STORM & UTILITY DETAILS
C6	GENERAL DETAILS
C7	EROSION CONTROL DETAILS
L1	LANDSCAPE PLAN

ARCHITECTURAL DRAWINGS

A1.0	FLOOR PLANS
A2.0	ROOF PLAN
A3.0	REFLECTED CEILING PLANS
A4.0	EXTERIOR ELEVATIONS
A5.0	BUILDING SECTIONS
A5.1	BUILDING SECTIONS
A5.2	BUILDING SECTIONS
A5.3	3D SECTIONS - REFERENCE ONLY
A6.0	WALL SECTIONS
A6.1	WALL SECTIONS
A6.2	STAIR & SECTION DETAILS
A7.0	ENLARGED KITCHEN PLAN & ELEVATIONS
A7.1	ENLARGED PLANS
A7.2	ENLARGED PLANS
A7.3	INTERIOR ELEVATIONS
A7.4	INTERIOR ELEVATIONS
A7.5	INTERIOR ELEVATIONS
A7.6	CASEWORK DETAILS
A8.0	DOOR SCHEDULE & DETAILS
A8.1	WINDOW & LOUVER SCHEDULE & DETAILS
A9.0	PARTITION TYPES AND ENLARGED DETAILS
A9.1	FLOOR PATTERN & FINISH SCHEDULE
A9.2	SIGNAGE PLAN & DETAILS

STRUCTURAL DRAWINGS

S001	Structural Notes
S100	Foundation Plan
S101	Second Floor Framing Plan
S102	Roof Framing Plan
S200	Typical Apparatus Bay Sections
S201	Typical Office Bay Sections and Typical Details
S202	Typical Sections
S203	Typical Structural Details

FIRE PROTECTION DRAWINGS

FP101	ADMINISTRATION AREA FIRE PROTECTION PLAN
FP102	MECHANICAL MEZZANINE AND APPARATUS BAYS FIRE PROTECTION PLAN
FP501	FIRE PROTECTION DETAILS
FP502	FIRE PROTECTION DETAILS

PLUMBING DRAWINGS

P001	NOTES AND LEGENDS - PLUMBING
P100	UNDERSLAB PLAN - PLUMBING
P101	FIRST FLOOR PLAN - PLUMBING
P102	UPPER LEVEL PLAN - PLUMBING
P200	UNDERSLAB PART PLAN - PLUMBING
P201	PART PLANS - PLUMBING
P300	SUPPLY ISOMETRIC PLANS - PLUMBING
P301	DRAINAGE ISOMETRIC PLAN - PLUMBING
P400	SCHEDULES - PLUMBING
P500	DETAILS - PLUMBING
P501	DETAILS - PLUMBING

MECHANICAL DRAWINGS

M001	MECHANICAL PLAN
M002	MECHANICAL SECTIONS
M003	MECHANICAL ISOMETRIC
M004	MECHANICAL SCHEDULES
M005	MECHANICAL DETAILS
M006	MECHANICAL GENERAL NOTES

ELECTRICAL DRAWINGS

E001	ELECTRICAL SYMBOLS, NOTES, ABBREVIATIONS & FIXTURE SCHEDULE
E002	LIGHT FIXTURE SCHEDULES
E101	MAIN LEVEL LIGHTING PLAN
E102	MEZZANINE LEVEL LIGHTING PLAN
E201	MAIN LEVEL POWER - ELECTRICAL
E202	MEZZANINE LEVEL POWER - ELECTRICAL
E203	ELECTRICAL SITE PLAN
E203a	ELECTRICAL SITE LIGHTING POINT BY POINT CALCULATION
E301	ELECTRICAL ONE LINE DIAGRAMS
E302	PANEL SCHEDULES
E401	ELECTRICAL DETAILS
E402	ELECTRICAL DETAILS

TECHNOLOGY DRAWINGS

T001	COMMUNICATIONS/SECURITY SYMBOLS, NOTES & ABBREVIATIONS
T101	MAIN LEVEL TECHNOLOGY PLAN
T102	MECHANICAL MEZZANINE TECHNOLOGY PLAN
T201	ONE LINE DIAGRAM & DETAILS - COMMUNICATIONS/SECURITY

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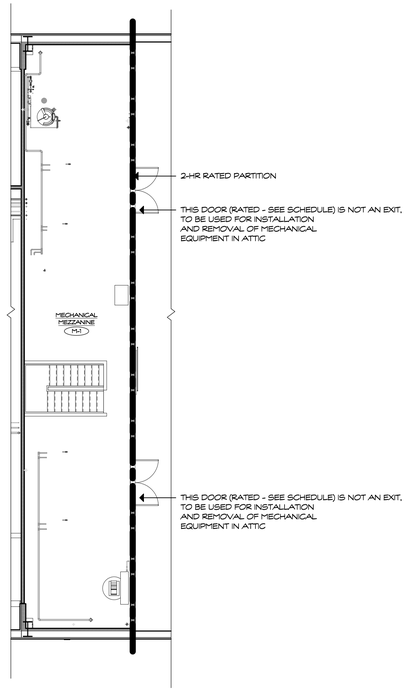
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
GENERAL INFORMATION AND DRAWINGS LIST

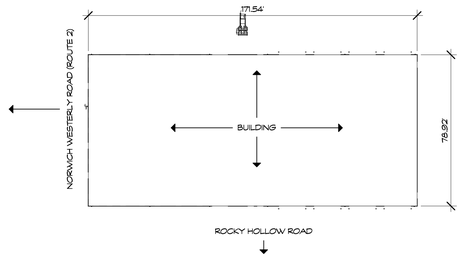
100% CD Submission

Date: 12/1/16
Scale:
Drawn By: BJV
Project Number: 13.220

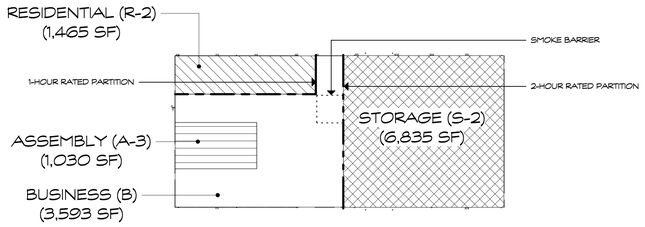
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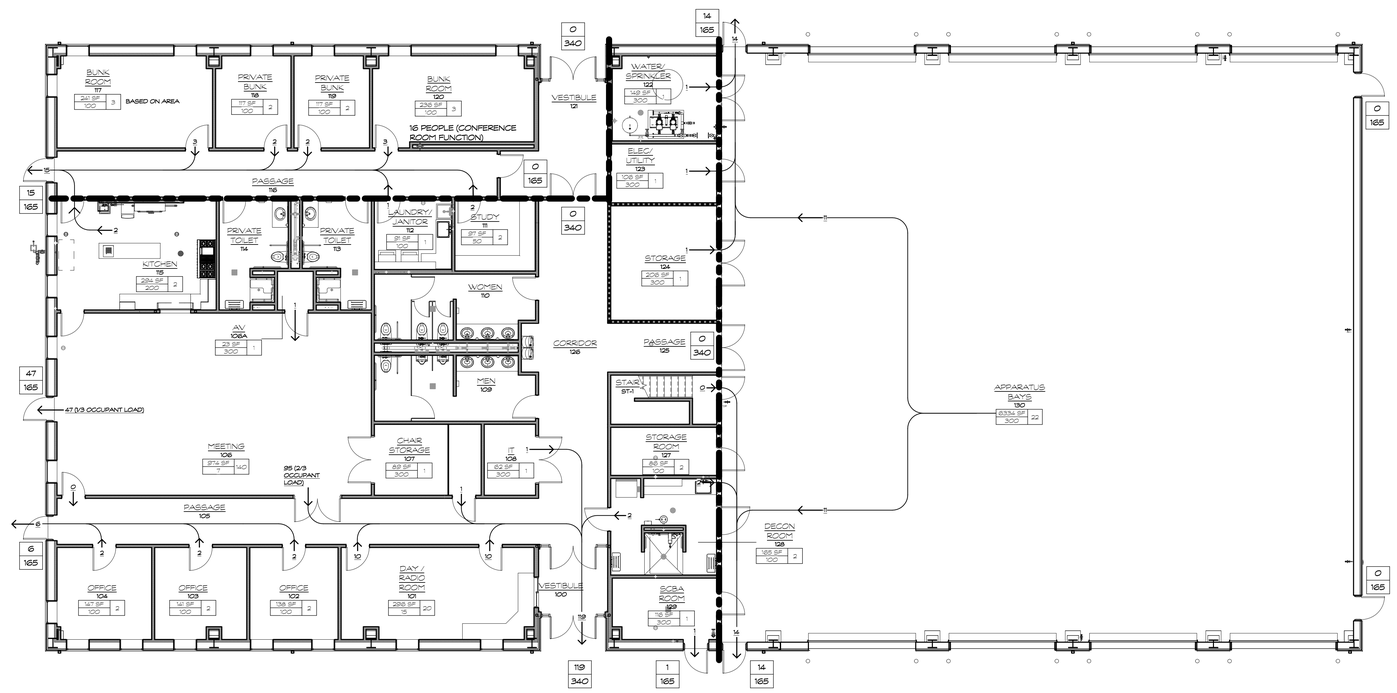
NORTH UPPER LEVEL CODE PLAN — SCALE: 1/8" = 1'-0" — 2 / A0.2



NORTH OPEN PERIMETER PLAN — SCALE: 1/32" = 1'-0" — 3 / A0.2



NORTH USE GROUP PLAN — SCALE: 1/32" = 1'-0" — 4 / A0.2



NORTH MAIN LEVEL CODE PLAN — SCALE: 1/8" = 1'-0" — 1 / A0.2

CODE LEGEND

ROOM NAME
101 — ROOM NUMBER
840 SF | 1 — AREA IN SF | OCC. LOAD FACTOR
20 — ROOM OCCUPANCY LOAD TAG

42 | 168 — ACTUAL EGRESS OCC. OF DOOR | MAX. ALLOWABLE EGRESS OCC. OF DOOR — EXIT CAPACITY TAG

127 → — DIRECTION OF TRAVEL W/ ACCUMULATED OCC. LOAD
TO ME → — MAXIMUM TRAVEL DISTANCE FROM FURTHEST POINT
198' → — COMMON PATH OF TRAVEL
- SMOKE BARRIER
- 1 HOUR FIRE RATED WALL AND SMOKE BARRIER
- 2 HOUR FIRE WALL
- 2 HOUR FIRE RATED WALL AND SMOKE BARRIER
- LOT LINE
o—o — DENOTES ACCESSIBLE THRESHOLD 1/2" MAX STEP WITH BEVELED THRESHOLD OR 1/2" STEP WITHOUT BEVELED THRESHOLD
60.66 — DIMENSION OF OPEN PERIMETER ALONG ENTIRE LONGITUDINAL FACE
(60.66) — DIMENSION OF NON-OPEN PERIMETER ALONG ENTIRE LONGITUDINAL FACE
⊗ — INDICATES LOSS OF EXIT AS PER IBC 1005.1.1 CT AMENDMENTS
AOR — AREA OF REFUGE. PROVIDE SIGN TYPE S22 ON WALL AT THESE LOCATIONS

CODE INFORMATION

DATE OF ORIGINAL CONSTRUCTION: N/A

1. GROUP CLASSIFICATION (Chapter 3)

(Primary)	A3/B/S2/R2
(Incidental)	NONE

2. CONSTRUCTION TYPE (Chapter 6)

Minimum Type Required	VB
Actual Type Provided (existing)	N/A
(new)	VB

3. BUILDING HEIGHT (Chapter 5)

Allowable Height (Story / feet)	2 / 60'
Actual Height (Story / Feet)	2 / 28-10"
(Stories above grade)	2

4. Building Area (Chapter 5)

a) Building Area (Main Level)

Existing Construction	N/A
New Construction	13,538
Total Floor	13,538

b) Building Area (Attic Level)

Existing Construction	N/A
New Construction	1,039
Total Floor	1,039

c) Building Area (All Floors)

Existing Construction	N/A
New Construction	14,577
Total Floors	14,577

5. AREA MODIFICATIONS TO TABLE 503

Total Perimeter = 78.92 ft. (N) 171.54 ft. (E) 78.92 ft. (S) 171.54 ft. (W)
Open Perimeter = 78.92 ft. (N) 171.54 ft. (E) 78.92 ft. (S) 171.54 ft. (W)

Total Frontage (F) 500.92 ft. (Building perimeter which fronts on a public way or open space having 20 feet open min.)
Perimeter (P) 500.92 ft. (perimeter of the entire building)

Width of open space (W) = 30

If = 100 [F/P-0.25]W/30

If = 100 [500.92/500.92-0.25] 30 /30 = 75

% frontage increase (If) = 75%

% of allowable tabular area, (AT) (table 503)	100%
% of increase for frontage, (If) (506.2)	75%
% of increase for automatic sprinklers (Is) (506.3)	300%
Total Percentage Factor	475%
Conversion Factor (total percentage factor / 100)	4.75

6. SINGLE OCCUPANCY OR NONSEPARATED USES (302.3.1)

(IBC Section 302.3.1 Nonseparated Uses): Each portion of the building shall be individually classified as to use. The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building. All other code requirements shall apply to each portion of the building based on the use of that space except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to these nonseparated uses. Fire separations are not required between uses, except as required by other provisions.

1. A-3 Assembly - 1 Story and 6,000 SF (1st Story Stringent)
2. B Business - 2 Story and 9,000 SF
3. S-2 Storage - 2 Story and 13,500 SF
4. R-2 Residential - 2 Story and 7,000 SF

Maximum Allowable Area Per Floor (Per Section 506.1)

Aa = At + (At If / 100) + (At Is/100)

Aa - Allowable Area Per Floor
At - Tabular Area Per Floor
If - Area Increase Due to Frontage
Is - Area Increase Due to Sprinkler

Aa = 6000 + (6000 * 75/100) + (6000 * 300/100)

Aa = 6000 + 4500 + 18000

Aa = 28,500 SF

7. Case 2 - MIXED OCCUPANCY SEPARATED USES (302.3.2)

(Not Used)

8. FIRE RESISTANCE RATED REQUIREMENTS FOR BUILDING COMPONENTS (TABLE 601)

1. STRUCTURAL FRAME	0	HRS.
2. BEARING WALLS - EXTERIOR	0	HRS.
- INTERIOR	0	HRS.
3. NONBEARING WALLS/PARTITIONS (EXTERIOR)	0	HRS.
4. NONBEARING WALLS/PARTITIONS (INTERIOR)	0	HRS.
5. FLOOR CONSTRUCTION	0	HRS.
6. ROOF CONSTRUCTION	0	HRS.

9. OCCUPANT LOAD

DESIGN TOTAL FOR MAIN FLOOR	216
DESIGN TOTAL FOR MECHANICAL ATTIC	N/A
TOTAL EXIT CAPACITY FOR MAIN FLR	2000
TOTAL EXIT CAPACITY FOR UPPER FLR	N/A
DESIGN TOTAL FOR BUILDING	216
TOTAL EXIT CAPACITY FOR BUILDING	2000

CODE INFORMATION

10. MODIFICATIONS

MODIFICATION #	APPROVED	NOT
(NONE)		

11. ACCESSIBLE BUILDING

DESIGNATED	X
NOT DESIGNATED	

12 MINIMUM PLUMBING FIXTURE COUNT (I.B.C. CHAPTER 29)

FOR EACH USE GROUP AND STAFF, PER ENTIRE FACILITY

GROUP 'A-3' OCCUPANCY (DESIGN LOAD = 140)

	REQUIRED
W/C MALE	0.56
W/C FEMALE	1.08
LAVS	0.7
DF	0.28

GROUP 'B' OCCUPANCY (DESIGN LOAD = 34)

	REQUIRED
W/C MALE	.68
W/C FEMALE	.68
LAVS	.85
DF	.34

GROUP 'S-2' OCCUPANCY (DESIGN LOAD = 24)

	REQUIRED
W/C MALE	0.12
W/C FEMALE	0.12
LAVS	0.24
DF	0.03

GROUP 'R-2' OCCUPANCY (DESIGN LOAD = 19)

	REQUIRED
W/C MALE	1.0
W/C FEMALE	1.0
LAVS	2.0
DF	0.20

FACILITY TOTAL (DESIGN LOAD = 217)

	REQUIRED	PROVIDED
W/C MALE	3 (2.36)	4
W/C FEMALE	3 (2.78)	4
LAVS	4 (3.79)	8
DF	1 (.85)	2

13. SPRINKLER PROTECTION

ENTIRE BUILDING	YES
LIMITED AREA	N/A

14. CODES TO WHICH THE PROJECT HAS BEEN DESIGNED

STATE BUILDING CODE W/ SUPPLEMENT	2003 IBC / 2005 CT w/ 2008, 2011 & 2013 AMENDMENTS
STATE FIRE CODE W/ SUPPLEMENT	2005 CFSC w/ 2009 & 2012 AMENDMENTS
STATE HEALTH CODE	MOST CURRENT
OSHA	MOST CURRENT
SECTION 504	MOST CURRENT
ADA	2010
OTHER	2015 CT FIRE SAFETY CODE

15. THRESHOLD BUILDING CONDITIONS

YES	NO
	X

16. BUILDING AREAS ENTIRE FACILITY

EXISTING UNALTERED CONSTUCTION	N/A
EXISTING ALTERED CONSTRUCTION	N/A
EXISTING BEING DEMOLISHED	N/A
TOTAL EXISTING CONSTRUCTION	N/A
TOTAL NEW CONSTRUCTION	14,261
TOTAL FACILITY	14,261

FIRE SAFETY CODE DATA:

1. CLASSIFICATION OF OCCUPANCY	ASSEMBLY (A-3) BUSINESS (B) STORAGE (S-2) RESIDENTIAL (R-2)
2. MINIMUM CONSTRUCTION REQUIRED / ACTUAL CONSTRUCTION PROVIDED	NONE / 5B
3. NOTIFICATION / ALARMS	YES
4. DETECTION	YES
5. EXTINGUISHMENT REQUIREMENTS	YES

BUILDING ENVELOPE REQUIREMENTS (U-VALUE)

	DESIGN MAX.	2009 IECC MAX.
ROOF	.051	.055
WALLS	.057	.069

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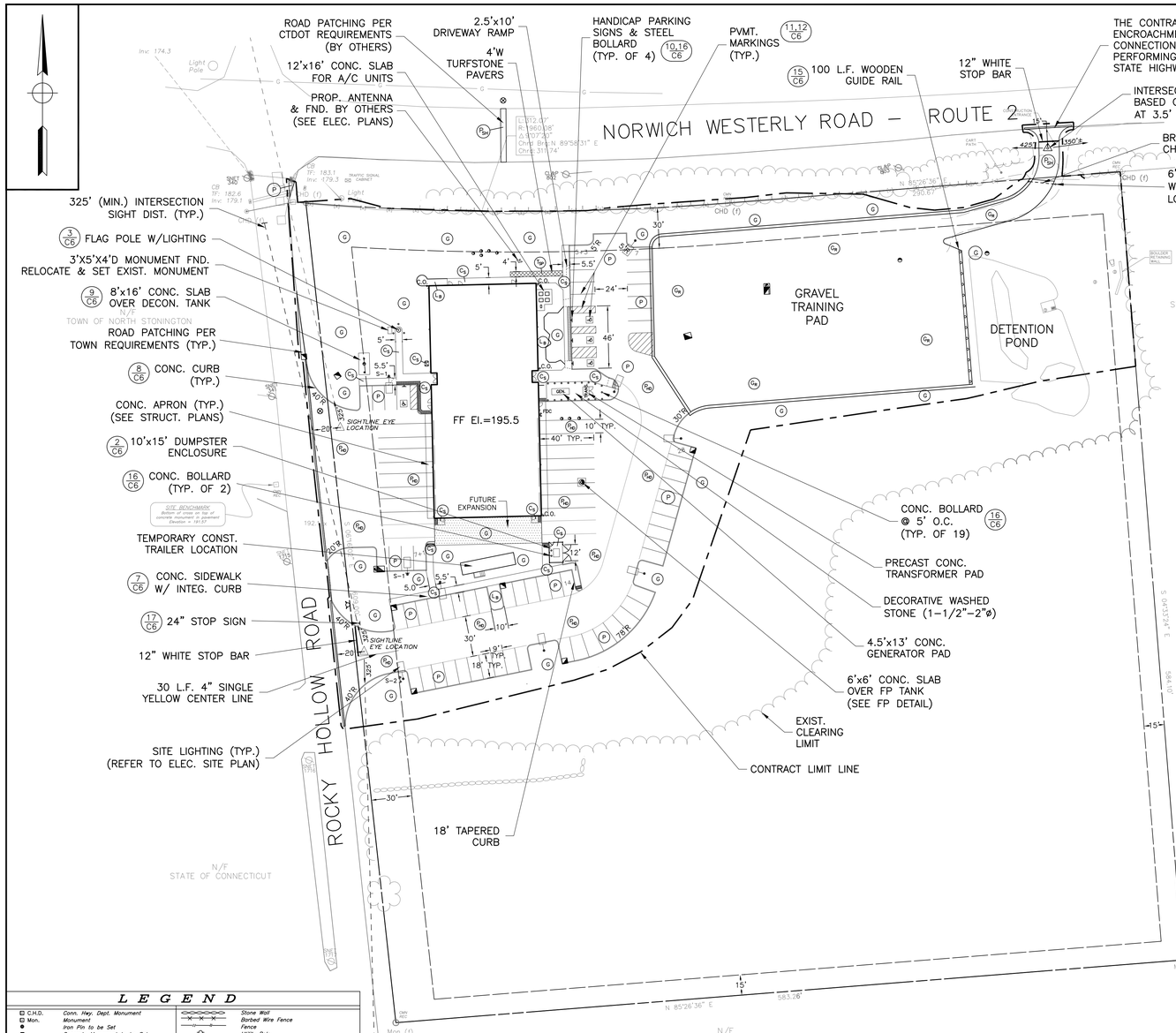
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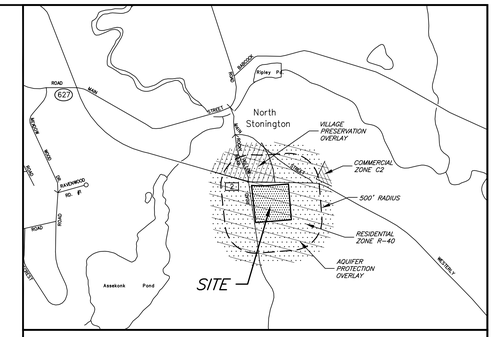
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CODE PLANS & INFORMATION

100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: BJV
Project Number: 13.220

Drawing Number: A0.2



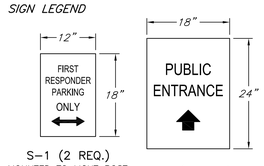


LOCATION MAP SCALE: 1" = 1000'

SYMBOL	DESCRIPTION	CROSS SECTION
C_S	CONCRETE SIDEWALK	Broom finish, score lines @ 30 s.f. +/– / 4", 3,000 # Cement concrete (3/4" stone) / 6" X 6" – 10/10 Welded wire fabric / 4", Compacted gravel base / Subgrade (common backfill)
G	GRASS	Lime, fertilizer and grass seed –see sheet L1 for appropriate seed mix / 6" Min., topsoil (no stones larger than 1") / Subgrade (common backfill)
P	BITUMINOUS CONCRETE PAVEMENT	2" Bituminous concrete surface course – Class 2 / 1–1/2" Bituminous concrete binder course – Class 1 / 6" Bank or crushed gravel (compacted) / 10" Rolled gravel subbase / Subgrade (common backfill)
P_{HD}	HEAVY–DUTY BITUMINOUS CONCRETE PAVEMENT	2" Bituminous concrete surface course – Class 2 / 4" Bituminous concrete binder course – Class 4 / 6" Bank or crushed gravel (compacted) / 10" Rolled gravel subbase / Subgrade (common backfill)
L_B	LANDSCAPE BED	2" Min. pine bark nuggets / Weed block fabric / 3" Min., topsoil (no stones larger than 3") / Subgrade (common backfill)
G_R	GRAVEL	12" Processed aggregate, bank run gravel or reclaimed misc. aggregate (compacted) / Subgrade (common backfill)
P_{SH}	PERMANENT PAVEMENT STATE HIGHWAYS	1–1/2" Class 1 bituminous concrete surface course / 1–1/2" Class 1 bituminous concrete binder course / 6" Class #4 prepritive bituminous concrete placed in 4 (+/–2) layers / 10" Rolled gravel subbase / Subgrade (common backfill)
T_{SP}	TURF STONE PAVERS	Infill voids with topsoil / 4" Turf Stone Pavers / 1" Sand base / 6" Processed aggregate / Subgrade (common backfill) / Turf Stone Pavers 15 5/8"W x 23 7/16"L x 4"H 5,000 psi. Concrete

SURFACE CODE LEGEND N.T.S.

SIGN LEGEND



S–1 (2 REQ.) MOUNTED TO LIGHT POST

S–2 (1 REQ.)

ZONING COMPLIANCE SUMMARY		
	REQUIRED	PROVIDED
ZONING DISTRICT: R–40 PROP. USE: MUNICIPAL FIRE STATION	SPECIAL PERMIT	SPECIAL PERMIT
LOT SIZE (TOTAL), S.F. (Ac.)	40,000 (0.92)	348,306 (8.00)
LOT FRONTAGE	150'	1,211'
FRONT YARD SETBACK	30'	53'
SIDE YARD SETBACK	15'	364'
REAR YARD SETBACK	25'	436'
BUILDING COVERAGE (MAX.)	15%	4%
BUILDING HEIGHT (MAX.)	40'	<40'
TOTAL PARKING SPACES	–	65
HANDICAP PARKING SPACES	3	4
BUILDING SIZE, S.F.	–	13,518
NUMBER OF STORIES	–	1
IMPERV. COVER INCL. BLDGS. (MAX.)	20%	16.9%

NOTES:

1. *Base survey information has been provided by Archer Surveying LLC, 468 Allen Hill Road, Brooklyn, CT, (860) 779–2240. This survey has been prepared pursuant to the Regulations of Connecticut State Agencies Section 20–300b–20 and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26, 1996.*

   This Survey conforms to a Class "A–2" Horizontal Accuracy and "T–2" Vertical Accuracy. Survey Type: Existing Conditions Survey, Boundary Determination: Resurvey, Intent: Depicting Existing Conditions with respect to Property Line. Topographic information obtained by actual field measurements, Datum Assumed.

2. *MAP REFERENCES:*
   a. *Map entitled "Existing Conditions Survey Prepared for Town of North Stonington, Route 2/ Rocky Hill Road, North Stonington, Connecticut," Scale: 1"=40', Dated: May 2014, Revised: June 2014, by Archer Surveying LLC, 468 Allen Hill Road, Brooklyn, CT, (860) 779–2240.*

3. *Parcel is known as Lot 6364 on Town of North Stonington Assessor's Map No. 109, and is located within Zone R–40.*

4. *Total Area = 348,306± S.F. – 8.00± Ac.*

5. *This lot does not include land areas within the Federal Emergency Management Agency's 100–year flood hazard area.*

6. *All underground utilities, structures and facility locations shown and depicted hereon must be considered approximate in nature. Additionally, other such underground utilities are NOT shown, the existence and location of which are unknown. Contact "CALL BEFORE YOU DIG" (1–800–922–4455) at least 72 hours in advance of construction, and have all utilities marked on the ground.*

7. *Owner & Applicant:* Town of North Stonington
   40 Main Street
   North Stonington, CT 06359

8. *No wetlands exist on this site per letter dated July 29, 2014 from Joseph Thoroux, Certified Soil Scientist, P.O. Box 32 Voluntown, CT 06384.*

   X_____
   Joseph Thoroux

9. *The Contractor is responsible for all site safety & security within the Contract Limit Line and shall take adequate precautions (i.e. signage, barriers & fencing) to secure the site and protect the general public.*

Site Plan approved by vote of the North Stonington Planning and Zoning Commission on 10/09/14.

X_____
Chairman of the Commission — Date

L E G E N D

C.H.D.	Conn. Hwy. Dept. Monument		Stone Wall
Mon.	Monument		Barbed Wire Fence
●	Iron Pin to be Set		Fence
■	Concrete Monument to be Set		Utility Pole
I. Pipe	Iron Pipe	U.I.	United Illuminating Co. Pole
I.P.	Iron Pin	C.L.&P.	Conn. Light & Power Co. Pole
D.H.	Drill Hole	SNET	Southern New England Telephone
P.S.	Pile of Stones		Manhole
F.P.	Fence Post	C.O.	Clean Out
Fnd.	Found		Catch Basin
n/f	Now or Formerly		Evergreen Tree
	Property Line		Deciduous Tree
	Centerline		Swampy or Wetlands
	Ledge or Boulders	90	Existing Contours
	Earth or gravel fill	90	Proposed Contours
200.0 ×	Existing Spot Elevation	R.C.P.	Reinforced Concrete Pipe
200.0 ×	Proposed Spot Elevation	H.D.P.P.	High Density Polyethylene Pipe
T.E.	Invert Elevation of Pipe		Test Boring Location, approx.
R.L.	Roof Leader	O Perc.#	Percolation Test Location
W.G.	Water gate valve	TP#	Deep Test Pit Location
G.G.	Gas gate valve		Stone Retaining Wall
W	Water main	S.C.	Soil Type
G	Gas main		Soil Type Boundary
WS	Water service lateral		Proposed Filter Barrier
SS	Sanitary sewer lateral	WL100	Wetland Flag Number
	Proposed bituminous apron		Proposed storm water catch basin
	Proposed construction entrance		Proposed storm water sewer
	Flush conditions at doorway		P.B.C. (Proposed bituminous curb)
			P.C.C. (Proposed concrete curb)

816 CONSTRUCTION NOTES

Any damage to the existing curb, sidewalk or any other highway appurtenances during the development of the permitted site will be replaced by the contractor as directed by the District 3 Permit Section at no cost to the state.

All work within the state right of way will comply with the State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction Form 816 with the latest Special Provisions and Typical State Standard Details.

PARKING SUMMARY:

The proposed site includes a total of 61 regular and 4 handicap parking spaces. Currently, the Emergency Services Departments have a combined total of approximately 75 members. The proposed training room will hold between 45 to 90 people, depending on the set–up. Based on historical use patterns, the Emergency Services Departments are confident the site has an adequate number of parking spaces. In the event of a large meeting or event requiring additional parking, the gravel training pad could hold approximately 32 additional cars for a total of approximately 100 spaces.

GRAPHIC SCALE:
40 0 40 80

REVISIONS		
NO.	DESCRIPTION	DATE
1	100% CD Submission	1/5/17
2	Issued for Bidding	2/10/17

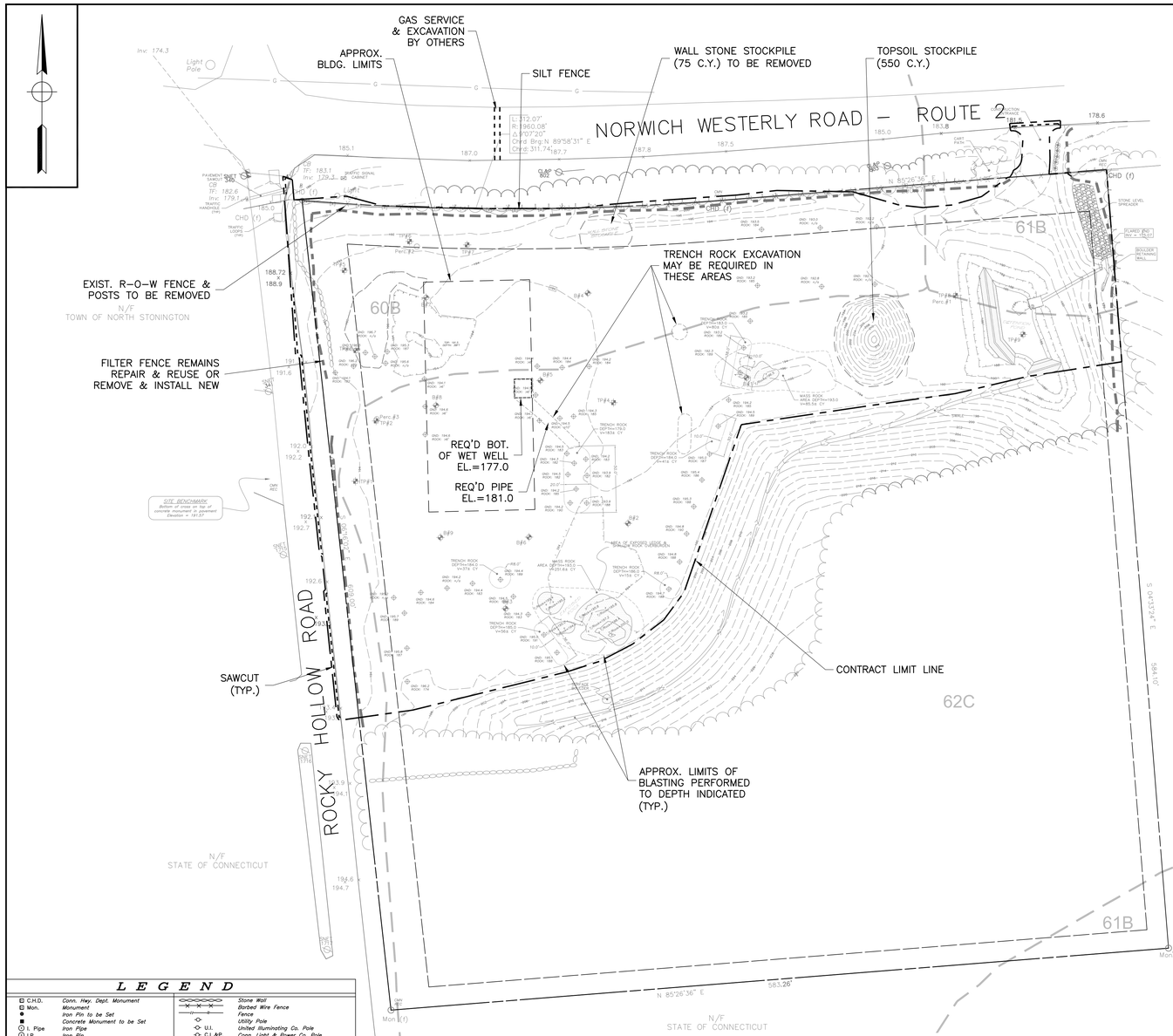
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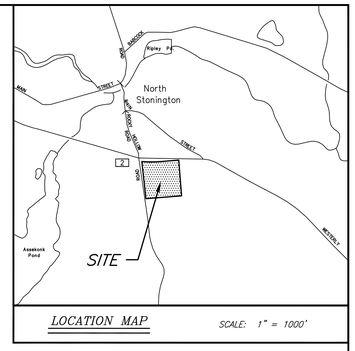
DONALD W. SMITH, JR., P.E.
CONSULTING ENGINEER
56 GREENWOOD CIRCLE SEYMOUR, CT 06483
Tel. 203–888–4904 Fax 203–881–3434 *dwsjrpe@sbcglobal.net*

SITE PLAN

TOWN OF NORTH STONINGTON
NEW CENTER FOR EMERGENCY SERVICES
#25 ROCKY HOLLOW ROAD
NORTH STONINGTON, CONNECTICUT

Job No. 14–01
Scale: 1"=40'
Date: 12/1/16
Designed: D.W.S.
Drawn: K.D.K.
Sheet: C1





LEGEND

C.H.D.	Conn. Hwy. Dept. Monument
Mon.	Monument
●	Iron Pin to be Set
■	Concrete Monument to be Set
I. Pipe	Iron Pipe
I.P.	Iron Pin
D.H.	Drill Hole
	Pile of Stones
F.P.	Fence Post
Fnd.	Found
n/f	Now or Formerly
	Property Line
	Centerline
	Ledge or Boulders
	Earth or gravel fill
200.0 x	Existing Spot Elevation
200.0 ×	Proposed Spot Elevation
I.E.	Invert Elevation of Pipe
R.L.	Roof Leader
W.G.	Water gate valve
G.G.	Gas gate valve
W	Water main
G	Gas main
WS	Water service lateral
SS	Sanitary sewer lateral
	Proposed bituminous apron
	Proposed construction entrance
	Flush conditions at doorway
	Stone Wall
	Barbed Wire Fence
	Fence
	Utility Pole
U.I.	United Illuminating Co. Pole
C.L.&P.	Conn. Light & Power Co. Pole
SNET	Southern New England Telephone
	Manhole
C.O.	Clean Out
	Catch Basin
	Evergreen Tree
	Deciduous Tree
	Swampy or Wetlands
90	Existing Contours
90	Proposed Contours
R.C.P.	Reinforced Concrete Pipe
H.D.P.P.	High Density Polyethylene Pipe
TB#	Test Boring Location, approx.
Perc.#	Percolation Test Location
TP#	Deep Test Pit Location
	Stone Retaining Wall
62C	Soil Type
	Soil Type Boundary
	Proposed Filter Barrier
WL100	Wetland Flag Number
	Proposed storm water catch basin
	Proposed storm water sewer
	P.B.C. (Proposed bituminous curb)
	P.C.C. (Proposed concrete curb)

NOTES:

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5. *This lot does not include land areas within the Federal Emergency Management Agency's 100–year flood hazard area.*

6. *All underground utilities, structures and facility locations shown and depicted hereon must be considered approximate in nature. Additionally, other such underground utilities are NOT shown, the existence and location of which are unknown. Contact "CALL BEFORE YOU DIG" (1–800–922–4455) at least 72 hours in advance of construction, and have all utilities marked on the ground.*

7. *Owner & Applicant:* *Town of North Stonington*
   40 Main Street
   North Stonington, CT 06359

8. *No wetlands exist on this site per letter dated July 29, 2014 from Joseph Thoroux, Certified Soil Scientist, P.O. Box 32 Voluntown, CT 06384.*

9. *The Contractor is responsible for all site safety & security within the Contract Limit Line and shall take adequate precautions (i.e. signage, barriers & fencing) to secure the site and protect the general public.*

10. *All removed items (fill, stumps, foundations, etc.) shall be legally disposed of off site.*

REVISIONS		
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2	Issued for Bidding	2/10/17

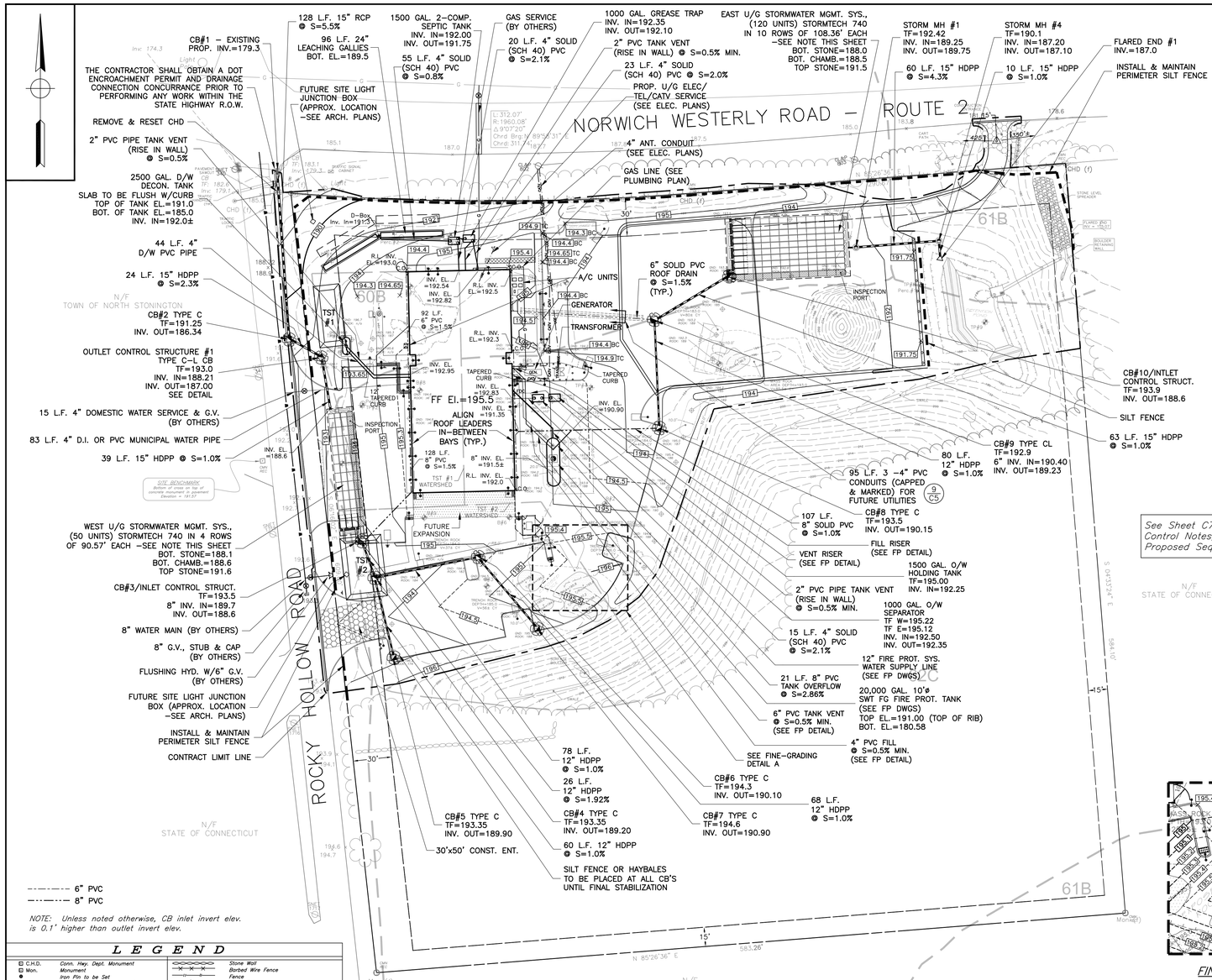
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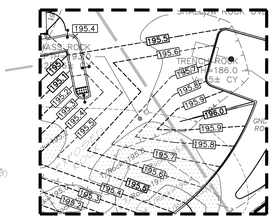
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Tel. 203–888–4904 Fax 203–881–3434 *dwsjrpe@sbcglobal.net*

EXISTING CONDITIONS & DEMOLITION PLAN

TOWN OF NORTH STONINGTON
NEW CENTER FOR EMERGENCY SERVICES
#25 ROCKY HOLLOW ROAD
NORTH STONINGTON, CONNECTICUT

Job No. 14–01
Scale: 1"=40'
Date: 12/1/16
Designed: D.W.S.
Drawn: K.D.K.
Sheet: C2





FINE–GRADING DETAIL A

SCALE: 1"=20'

L E G E N D

C.H.D.	Conn. Hwy. Dept. Monument
Mon.	Monument
●	Iron Pin to be Set
■	Concrete Monument to be Set
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I.P.	Iron Pin
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TEMPORARY SEDIMENT TRAP SCHEDULE

TST #	CONTRIBUTING AREA (Ac.)	REQUIRED VOL. 134 c.y./Ac. (c.f.)	VOL. PROVIDED (c.f.)	BOTTOM (Elev./Dim's)	WATER SURFACE (Elev./Dim's)	TOP BERM ELEV.
1	0.41	1495	1656	191.0/12x40	193.0/20x48	194.0
2	0.75	2713	2760	190.0/24x40	192.0/32x48	193.0

GRAPHIC SCALE:

40 0 40 80

MAINTENANCE & PROTECTION OF TRAFFIC SIGNAL:

For the installation of the proposed site improvements along Rocky Hollow Road depicted hereon, the Contractor shall be responsible for the continuous operational function of the traffic signal at the intersection of Rocky Hollow Road and Nowich–Westerly Road (CT Route #2).

The Contractor shall disconnect and carefully remove the existing traffic signal loop detectors in order to install new storm drain pipe. The loop detector wire shall be carefully cleaned of all mastic and reinstalled within the bituminous concrete trench repair. If the Contractor fails to utilize the proper care, he shall be responsible for replacement of the entire loop(s) in accordance with CTDOT requirements at no cost to the Owner.

U/G STORMWATER MANAGEMENT AREAS:

Minimize const. traffic over U/G Stormwater Management Areas to prevent soil compaction prior to system installation. Schedule installation of West U/G System just prior to paving.

DETENTION POND MAINTENANCE:

1. *The detention pond shall be maintained in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control by the Connecticut Council on Soil and Water Conservation in cooperation with the Connecticut Department of Environmental Protection.*
2. *The detention pond shall be monitored and inspected on a periodic basis, at least twice annually, and after severe storm events. Adequate records shall be kept of all inspections.*
3. *Accumulated sediment and debris shall be removed from the detention pond and disposed of in a proper manner consistent with the Guidelines. This is to be done after construction is completed and all slopes are stabilized and thereafter on a periodic basis. The pond bottom shall be maintained in such a way to insure that all flows will discharge through the outlet structure.*
4. *The side slopes of the pond shall be periodically inspected for erosion. Vegetative cover and rip rap shall be replaced as necessary for bank stabilization.*
5. *Proper access for inspection and maintenance equipment shall be maintained.*
6. *The outlet structure shall be inspected and maintained free of all debris and sediment.*
7. *Additional maintenance measures shall be implemented as necessary to comply with the intent of the plan.*
8. *Trees and brush shall not be allowed to grow within the limits of the detention pond or on the downstream embankment face.*

NOTES:

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7. *Owner & Applicant: Town of North Stonington 40 Main Street North Stonington, CT 06359*
8. *No wetlands exist on this site per letter dated July 29, 2014 from Joseph Thoroux, Certified Soil Scientist, P.O. Box 32 Voluntown, CT 06384.*

   X_____ *Joseph Thoroux*
9. *Erosion and Sediment Control Plan Certified by vote of the North Stonington Planning and Zoning Commission on 10/09/14.*

   X_____ *Chairman or Secretary of the Commission*
10. *The Contractor is responsible for all site safety & security within the Contract Limit Line and shall take adequate precautions (i.e. signage, barriers & fencing) to secure the site and protect the general public.*

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NO.	DESCRIPTION	DATE
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GRADING, UTILITY & EROSION CONTROL PLAN

TOWN OF NORTH STONINGTON
NEW CENTER FOR EMERGENCY SERVICES
#25 ROCKY HOLLOW ROAD
NORTH STONINGTON, CONNECTICUT

Job No.	14–01
Scale:	1"=40'
Date:	12/1/16
Designed:	D.W.S.
Drawn:	K.D.K.
Sheet:	C3

CONSTRUCTION NOTES:

1. All methods and materials used in the construction of the SSDS indicated on this plan shall conform to the latest provisions of the CT Public Health Code Regulations and Technical Standards for Subsurface Sewage Disposal Systems.
2. The sewer pipe from the house to the septic tank shall be 4" diameter Schedule 40 PVC pipe or approved equal in conformance with the latest Health Code.
3. Solid PVC pipes and fittings shall conform to ASTM D-3034 SDR-35, perforated PVC pipes and fittings shall conform to ASTM D-3305 or in conformance with the latest Health Code.
4. Fields shall be staked prior to construction to prevent further compaction of the existing soil.
5. Construction equipment is to stay off the area of system before and after installation.
6. Existing topsoil and unsuitable fill materials are to be removed from system area prior to placing fill. Existing ground shall be scarified to a minimum depth of 6" prior to placing fill.
7. Fill in area of the septic system shall be clean, bank-run sand or gravel meeting the following criteria:
   a. The fill shall not contain any material larger than three (3) inches.
   b. Up to 45% of the dry weight of the representative sample may be retained on the #4 sieve (This is the gravel portion of the sample).
   c. The material that passes the #4 sieve is then reweighed and the sieve analysis started.
   d. The remaining sample shall meet the following wet sieve gradation criteria:

Sieve	% Passing
#4	100%
#10	70% - 100%
#40	10% - 50% (See note below)
#100	0% - 20%
#200	0% - 5%

   Note: Percent passing the #40 Sieve can be increased to no greater than 75% if the percent passing the 100% Sieve does not exceed 10% and the 200% does not exceed 5%.
8. Installer shall provide the Health Dept. and design engineer with a Gradation Test report on the fill material. The sample for the Gradation Test shall be taken from the material, which is brought to the site. A test report from "The Bank" is not sufficient
9. Fill shall be placed in 6-8" lifts benched into the existing slopes and compacted to 90% of the optimum density.
10. Septic system shall be installed after necessary fill has been placed and compacted.
11. Installer of septic system shall be responsible for conformance of fill to gradation and compaction requirements.
12. All structures shall be clearly marked after construction.
13. Septic system shall be protected from siltation and erosion during and after construction.
14. Septic system shall shed surface water after completion.
15. Fill shall not be installed on frozen or muddy ground.
16. System shall not be installed in frozen fill. Installer shall protect fill at all times.
17. After the select septic system fill has been placed and compacted, percolation tests shall be performed by the design engineer in the select fill material. These tests shall be performed in the presence of the local Health Department.
18. The location of the improvements shown hereon shall be staked by a licensed land surveyor prior to construction.
19. An As-built drawing of the completed system shall be prepared by a registered land surveyor, under the direction of the design engineer, prior to covering.
20. The contractor shall notify the design engineer at least 48 hrs. in advance of leaching area preparation and septic system installation in order to allow observation of the work.
21. Septic filter to be, Orenco Systems FT0444-36 or approved equal.

SEPTIC SYSTEM DESIGN CRITERIA:

1. ESTIMATED PEAK SEPTIC FLOW:

USE	PERSONS/DAY	GPD/PERSON	FLOW (GPD)
EMPLOYEES (WITH SHOWERS)	6	25	150
EMPLOYEES (WITHOUT SHOWERS)	10	20	200
TRAINING/MEETING (WITH FOOD SVC.)	54*	5	270**
MISCELLANEOUS ACTIVITIES	20	5	100
		TOTAL	720 GPD

* Based on size of Main Assembly Room and 15 s.f./person (tables & chairs).
** Table 7 Application Rate

ACTUAL PERCOLATION RATE: 1" in less than 10.1 min.

450 gpd @ 1.5 gpd/s.f. = 300 s.f.
270 gpd @ 0.8 gpd/s.f. = 338 s.f.
TOTAL 638 s.f. Effective Leaching Area Required

2. EFFECTIVE LEACHING AREA PROVIDED:

96 l.f. of 24" gallies in a single row, 98' long provides 666 s.f. effective area.

MLSS: does not apply. There is no Restrictive Layer; the grey compact soils perc at 1" in 10 minutes.

3. Water supplied by public water supply.
4. No well within 75 feet of septic system.
5. No hot tubs, spas, garbage grinders, water systems or swimming pools shall be discharged into septic system area.
6. Design of system based on the noted soil test data. The installer of the system shall be responsible for notifying the engineer of additional field conditions, such as ledge, groundwater, bury holes, etc., discovered during construction. Such conditions may require system redesign.
7. System elevations based on depth of mottling in original soil.

SOIL TESTING RESULTS:

TESTING PERFORMED BY THE OFFICE OF DONALD W. SMITH, JR., P.E. CONSULTING ENGINEER, DEEP TEST PITS OBSERVED BY WAYNE GREEN R.S. OF THE NORTH STONINGTON HEALTH DEPT.

TP #1 (6/4/14)

0"-8"	TOPSOIL
8"-36"	ORN-BRN SANDY LOAM
36"-50"	ORG. MOTTLED SANDY LOAM
50"-115"	GREY COMPACT SANDY HARD PAN

NO LEDGE / NO WATER / MOTTLING @ 36"

TP #2 (6/4/14)

0"-8"	TOPSOIL
8"-40"	ORN-BRN SANDY LOAM
40"-120"	GREY COMPACT SANDY HARD PAN (SIEVE SAMPLE #1 @ 60")

NO LEDGE / NO WATER / MOTTLING @ 40"

TP #3 (6/4/14)

0"-8"	TOPSOIL
8"-52"	ORN-BRN SANDY LOAM
52"-125"	GREY F-C SAND & F GRAVEL, COMPACT

NO LEDGE / NO WATER / NO MOTTLING

TP #4 (6/4/14)

0"-10"	TOPSOIL
10"-38"	ORN-BRN SANDY LOAM
38"-144"	GREY COMPACT SAND & F GRAVEL (SIEVE SAMPLE #3 @ 72")

NO LEDGE / NO WATER / NO MOTTLING

TP #5 (6/4/14)

0"-8"	TOPSOIL
8"-42"	ORN-BRN SANDY LOAM
42"-110"	GREY COMPACT SAND & F GRAVEL

NO LEDGE / NO WATER / NO MOTTLING

TP #6 (6/4/14)

0"-8"	TOPSOIL
8"-28"	ORN-BRN SANDY LOAM
28"-110"	GREY COMPACT SAND & F GRAVEL

NO LEDGE / NO WATER / NO MOTTLING

TP #7 (6/4/14)

0"-10"	TOPSOIL
10"-55"	ORN-BRN SANDY LOAM
55"-125"	GREY COMPACT SAND & F GRAVEL

NO LEDGE / NO WATER / MOTTLING @ 55"

TP #8 (6/4/14)

0"-8"	TOPSOIL
8"-30"	ORN-BRN SANDY LOAM
30"-48"	GREY COMPACT SAND & F GRAVEL - STOPPED EXCAVATION @ 48" NOT REFUSAL

NO LEDGE / NO WATER / NO MOTTLING

TP #9 (6/4/14)

0"-8"	TOPSOIL
8"-30"	ORN-BRN SANDY LOAM
30"-144"	TAN & GREY COMPACT SAND & F GRVL (SIEVE SAMPLE #2 @ 96")

NO LEDGE / NO WATER / NO MOTTLING

PERCOLATION TEST: #1
DEPTH: 16" (TOP AT 54" BELOW GRADE) DATE: 6/4/14

TIME	D.T.W.	INC. DROP	MIN./IN.
1:30	PRESOAK		
2:26	8 1/4"		
2:31	10"	1 3/4"	2.9
2:36	11 3/8"	1 3/8"	3.6
2:41	12 3/4"	1 3/8"	3.6
2:46	14"	1 1/4"	4.0
2:51	DRY		

MINIMUM PERCOLATION RATE = 1" IN LESS THAN 10.1 MIN.

PERCOLATION TEST: #2
DEPTH: 24" DATE: 6/4/14

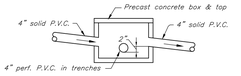
TIME	D.T.W.	INC. DROP	MIN./IN.
1:45	PRESOAK		
3:44	12"		
3:54	17"	5"	2.0
4:04	19 1/4"	2 1/4"	4.4
4:14	21"	1 3/4"	5.7
4:24	22 1/4"	1 1/4"	8.0
4:29	DRY		

MINIMUM PERCOLATION RATE = 1" IN LESS THAN 10.1 MIN.

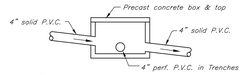
PERCOLATION TEST: #3
DEPTH: 10" (VERY COMPACT - TOP AT 62" BELOW GRADE)
DATE: 6/4/14

TIME	D.T.W.	INC. DROP	MIN./IN.
2:05	PRESOAK		
3:07	3"		
3:17	5 1/8"	2 1/8"	4.7
3:27	7"	1 7/8"	5.3
3:37	8 1/4"	1 1/4"	8.0
3:47	9 1/2"	1 1/4"	8.0
3:52	10"	1/2"	10.0
3:57	DRY		

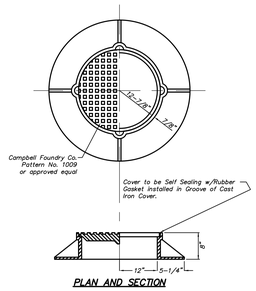
MINIMUM PERCOLATION RATE = 1" IN LESS THAN 10.1 MIN.



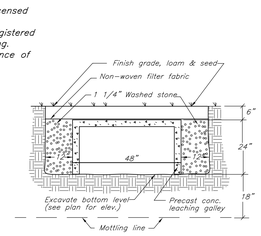
DISTRIBUTION BOX H.L.O.
High level overflow



(1) DISTRIBUTION BOX

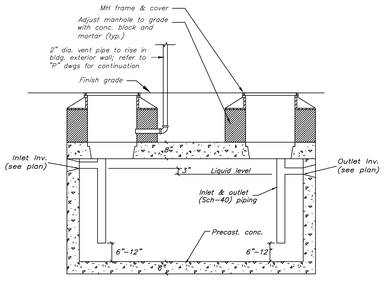


(6) STANDARD CAST IRON MANHOLE FRAME & COVER
N.T.S.

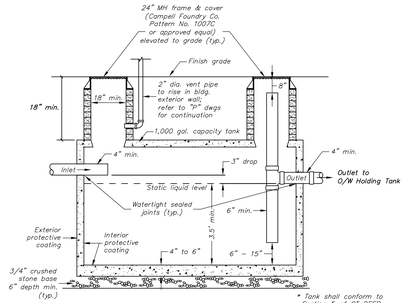


Leaching galley notes:
1. Concrete compressive strength: 4000 p.s.i. @ 28 days.
2. Heavy duty galleys where required "H.D." shall be capable of supporting HS-20 loading.
3. Leaching area: 6.8 S.F./L.F. as per Connecticut state health code revised Jan. 1, 2004.

(2) 24" HIGH LEACHING GALLEY DETAIL
N.T.S.



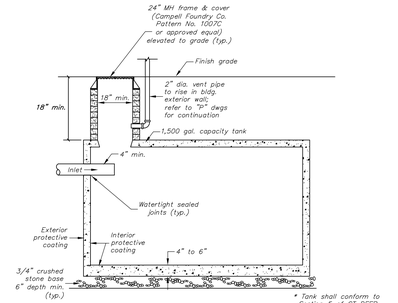
(3) 1000 GALLON GREASE TRAP DETAIL
N.T.S.



(4) OIL/WATER SEPARATOR TANK*
(HS-20 LOADING REQUIRED)
N.T.S.

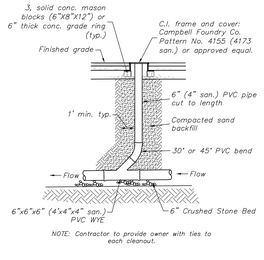
* Tank shall conform to Section 5 of CT DEEP General Permit for the Discharge of Vehicle Maintenance Wastewater, latest revision.

NOTE: the Owner is responsible for registering the oil/water separator system with the CT DEEP.



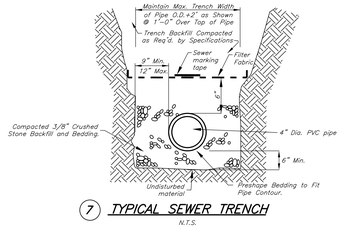
(5) OIL/WATER HOLDING TANK*
(HS-20 LOADING REQUIRED)
N.T.S.

* Tank shall conform to Section 5 of CT DEEP General Permit for the Discharge of Vehicle Maintenance Wastewater, latest revision.



NOTE: Contractor to provide owner with ties to each cleanout.

(6) STORM & SAN. CLEANOUT DETAIL
N.T.S



(7) TYPICAL SEWER TRENCH
N.T.S.

REVISIONS		
NO.	DESCRIPTION	DATE
1	100% CD Submission	1/5/17
2	Issued for Bidding	2/10/17

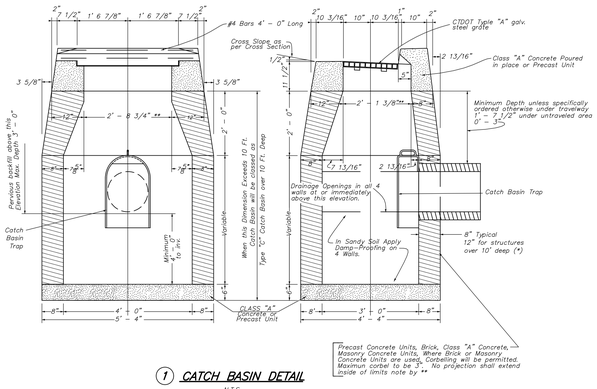
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06518-2340
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

DONALD W. SMITH, JR., P.E.
CONSULTING ENGINEER
56 GREENWOOD CIRCLE SEYMOUR, CT 06483
Tel. 203-888-4904 Fax 203-881-3434 dwsjrpe@sbcglobal.net

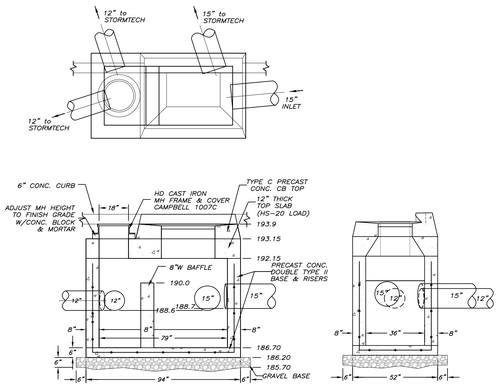
SEPTIC SYSTEM DETAILS

TOWN OF NORTH STONINGTON
NEW CENTER FOR EMERGENCY SERVICES
#25 ROCKY HOLLOW ROAD
NORTH STONINGTON, CONNECTICUT

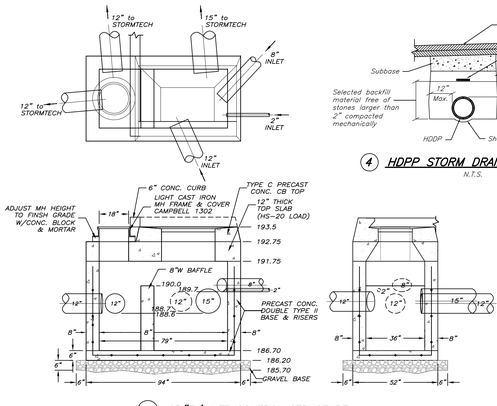
Job No. 14-01
Scale: As Noted
Date: 12/1/16
Designed: D.W.S.
Drawn: K.D.K.
Sheet: C4



1 CATCH BASIN DETAIL
N.T.S.

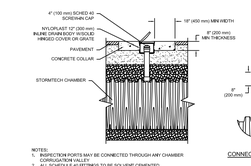


2 CB#10/INLET CONTROL STRUCTURE
N.T.S.

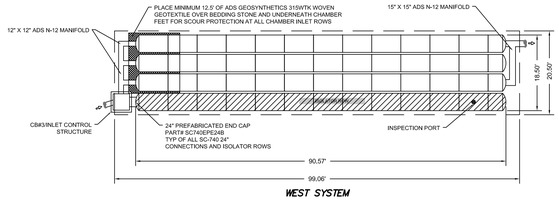


3 CB#3/INLET CONTROL STRUCTURE
N.T.S.

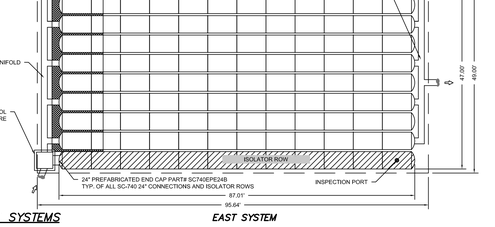
4 HDPP STORM DRAIN TRENCH
N.T.S.



STORMTECH SC-740 INSPECTION PORT DETAIL
NTS

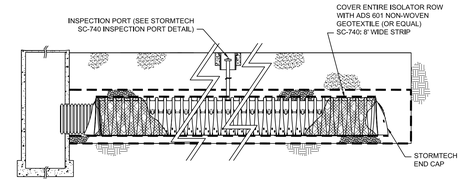


WEST SYSTEM

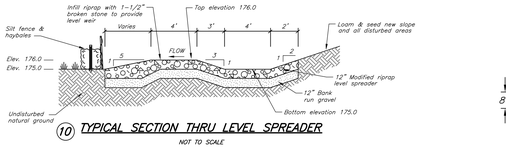


EAST SYSTEM

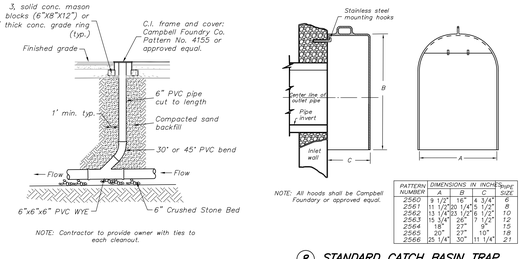
6 STORMTECH SC-740 U/G STORMWATER MGMT. SYSTEMS
N.T.S.



5 STORMTECH SC-740 ISOLATOR ROW PROFILE
N.T.S.



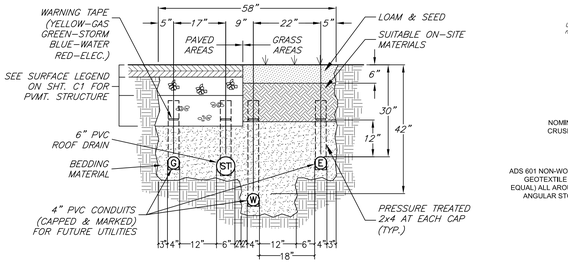
10 TYPICAL SECTION THRU LEVEL SPREADER
NOT TO SCALE



7 ROOF DRAIN CLEANOUT DETAIL–PVMT.
N.T.S

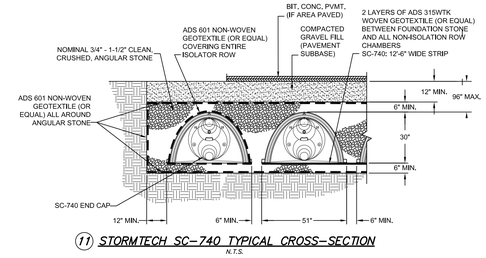
PATTERN NUMBER	DIMENSIONS IN INCHES A	B	C	PIPE SIZE
2560	9 1/2"	16"	4 3/4"	6
2561	11 1/2"	20 1/4"	5 1/2"	8
2562	13 1/4"	23 1/2"	6 1/2"	10
2563	15 3/4"	26"	7 1/2"	12
2564	18"	27"	10"	15
2565	22"	27"	10"	18
2566	25 1/4"	30"	11 1/4"	21

8 STANDARD CATCH BASIN TRAP
N.T.S.

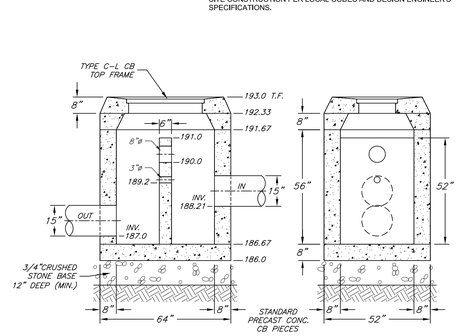


NOTE: CAP ENDS AND PROVIDE TIE DIMENSIONS TO EACH CAP FROM 2 FIXED OBJECTS

9 ROOF DRAIN PIPE AND CONDUITS FOR FUTURE USE
N.T.S.



11 STORMTECH SC-740 TYPICAL CROSS-SECTION
N.T.S.



12 OUTLET CONTROL STRUCTURE #1 DETAIL
N.T.S.

STORMWATER CHAMBER SPECIFICATIONS:

1. CHAMBERS SHALL BE STORMTECH SC-740 OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS TESTED USING ASTM STANDARDS.
3. CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.
6. ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
   a. A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET, THE 50-YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418-05 MUST BE USED AS A PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
7. CHAMBERS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
8. ALL DESIGN SPECIFICATIONS FOR CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST DESIGN MANUAL.
9. THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.

STORMTECH GENERAL NOTES:

1. STORMTECH REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
2. STORMTECH TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL **1-888-892-2694** TO SPEAK TO A TECHNICAL SERVICES REPRESENTATIVE OR VISIT **WWW. STORMTECH.COM** TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
3. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
4. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE ADS 601 OR EQUAL (FILTER FABRIC) MUST BE USED AS INDICATED IN THE DETAILS.
5. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
6. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
7. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: **WWW.STORMTECH.COM**. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
8. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.

REVISIONS		
NO.	DESCRIPTION	DATE
1	100% CD Submission	1/5/17
2	Issued for Bidding	2/10/17

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06518-2340
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

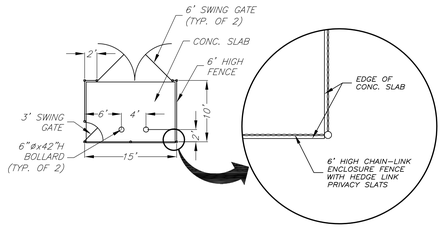
DONALD W. SMITH, JR., P.E.
CONSULTING ENGINEER
56 GREENWOOD CIRCLE SEYMOUR, CT 06483
Tel. 203-888-4904 Fax 203-881-3434 dwsjrpe@sbcglobal.net

STORM & UTILITY DETAILS

TOWN OF NORTH STONINGTON
NEW CENTER FOR EMERGENCY SERVICES

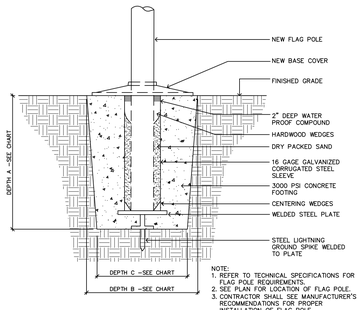
#25 ROCKY HOLLOW ROAD
NORTH STONINGTON, CONNECTICUT

Job No. 14-01
Scale: As Noted
Date: 12/1/16
Designed: D.W.S.
Drawn: K.D.K.
Sheet: C5



2 DUMPSTER ENCLOSURE DETAIL PLAN VIEW

N.T.S.

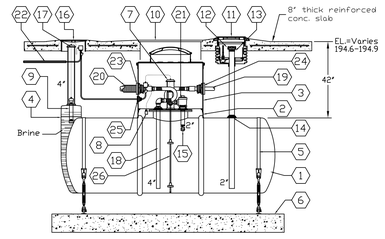


NOTE:
1. REFER TO TECHNICAL SPECIFICATIONS FOR FLAG POLE REQUIREMENTS.
2. SEE PLAN FOR LOCATION OF FLAG POLE.
3. CONTRACTOR SHALL SEE MANUFACTURER'S RECOMMENDATIONS FOR PROPER INSTALLATION OF FLAG POLE.

POLE HEIGHT	DEPTH A	DEPTH B	DEPTH C
20'	3'-6"	30"	24"
25'	3'-6"	30"	24"
30'	3'-6"	30"	24"
35'	4'-0"	36"	30"
40'	4'-6"	42"	36"
45'	5'-0"	48"	42"
50'	5'-6"	48"	42"
60'	6'-10"	48"	42"
70'	8'-0'	60"	48"
80'	9'-0"	60"	48"

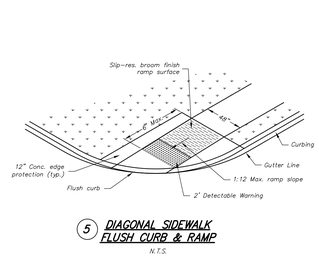
3 FLAG POLE FOOTING

N.T.S.



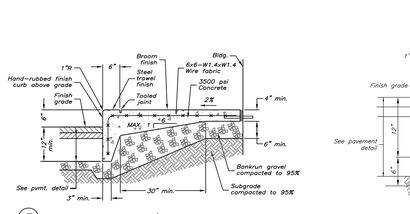
PARTS LIST			
No.	Manuf.	Model	Description
1	Xerxes		2500 gal. double-wall fiberglass chem waste tank (6'8 x 13'-5 3/4")
2	Xerxes		42" dia. x 6' tall attached collar
3	Xerxes		42" dia. watertight attached collar riser (piping sump)
4	Omntec	KI-V, OELR0001	Tank monitor kit w/printer; to include Item #7 probe & #26 float, RS-232 port, gal. display, local alarms
5			Fiberglass hold-down straps (2) w/Harding 3/4"x9" galv. jaw turnbuckles (4)
6			Set of two 12" conc. deadman hold-downs
7	Omntec		MTG inventory probe
8	Omntec	BX-LS	Piping sump leak sensor
9	Omntec	BX-RES	Fiberglass reservoir sensor
10	Morrison	418LC-3800	38" dia. manhole with composit lid, bolted
11	Fairfield	SCM-5/2	Five gal. pump-out manhole, H-25, stainless bucket
12	Evertite	20DCSS	2" stainless dust cap, pump-out
13	Evertite	20ASS	2" adapter x 2" Female thread, stainless, pump-out
14	OEM	4603	4" x 2" double tapped bushing
15			Ball float
16	Morrison	418TM-1100AM	18" dia. interstitial monitor manhole
17	Omntec	VC-1	Vented reservoir cap kit
18			4" PVC wastewater drain w/OEM 4609 6" x 4" double tapped bushing
19	Ameron	20854386	2" dia. single wall fiberglass vent pipe
20	Ameron	44464386	4" dia. LCX coaxial FRP pipe
21	DPW	233-4420	0"x2" vent valve extractor
22			1" conduit to building
23	DPW-FW	EBF-0400	4" flex entry bulkhead, drain
24	DPW-FW	EBF-0200F	2" flex entry bulkhead, vent
25	DPW-FW	EBF-0751	1" flex entry bulkhead, conduit
26	Omntec	SSF-2	2" stainless steel product float

* Tank Item #1) to include premium vinylester chemical lining, 22" dia. manway w/four 4" & one 6" npt cover fittings, 4" dia. npt shell wall service fitting, and items #2 & 3 (42" collar & riser), with reservoir factory-filled w/brine.



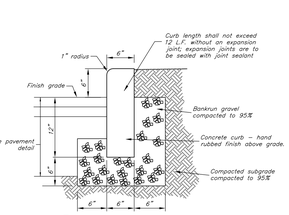
6 DETECTABLE WARNING AREA

N.T.S.



7 CONCRETE WALK W/INTEGRAL CURB

N.T.S.

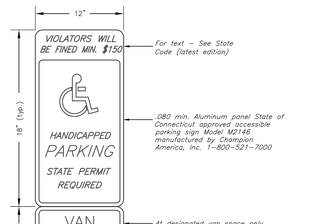


8 CONCRETE CURB

N.T.S.

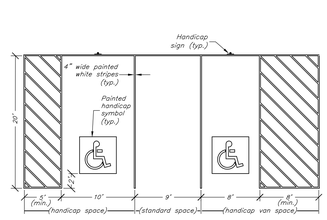
5 DIAGONAL SIDEWALK FLUSH CURB & RAMP

N.T.S.



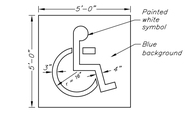
10 HANDICAP PARKING SIGN

N.T.S.



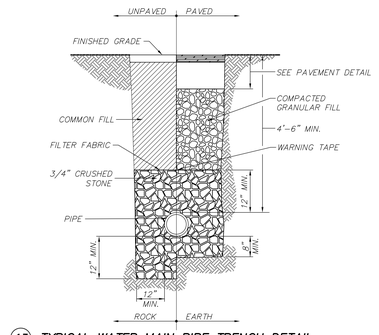
11 TYPICAL HANDICAP PARKING SPACE PAVEMENT MARKING

N.T.S.



12 STANDARD HANDICAP SYMBOL PAVEMENT MARKING

N.T.S.

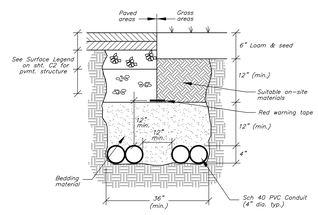


13 TYPICAL WATER MAIN PIPE TRENCH DETAIL

NOT TO SCALE

9 DECON. HOLDING TANK DETAIL

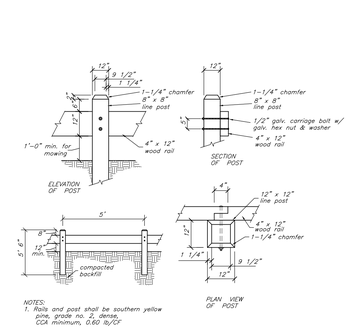
N.T.S.



NOTES:
1. A minimum of 12" separation, vertical or horizontal, shall be maintained between communication or CATV cables and electrical cable(s) or their conduits.
2. A minimum separation of 18" in all directions shall be maintained between electrical conduits and water or fuel lines. Joint trenching is not permitted with any gas lines.

14 PRIMARY & SECONDARY ELEC. SERVICE U/G CONDUIT BEDDING DETAIL

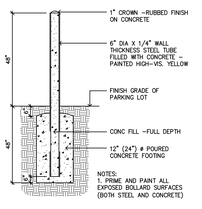
N.T.S.



NOTES:
1. Rails and post shall be southern yellow pine, grade no. 2, dense, CCA minimum, 0.60 lb/CF

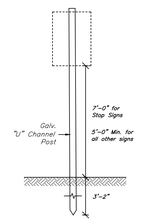
15 WOODEN GUIDE RAIL

N.T.S.



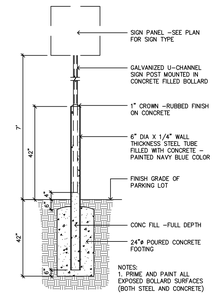
16 STEEL BOLLARD

N.T.S.



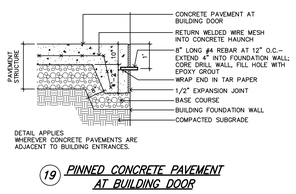
17 METAL SIGN DETAIL

N.T.S.



18 SIGN MOUNTED IN STEEL BOLLARD

N.T.S.



DETAIL APPLIES WHEREVER CONCRETE PAVEMENTS ARE ADJACENT TO BUILDING ENTRANCES.

19 PINNED CONCRETE PAVEMENT AT BUILDING DOOR

N.T.S.

REVISIONS		
NO.	DESCRIPTION	DATE
1	100% CD Submission	1/5/17
2	Issued for Bidding	2/10/17

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06518-2340
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

DONALD W. SMITH, JR., P.E.
CONSULTING ENGINEER
56 GREENWOOD CIRCLE SEYMOUR, CT 06483
Tel. 203-888-4904 Fax 203-881-3434 dwsjrpe@sbcglobal.net

GENERAL DETAILS

TOWN OF NORTH STONINGTON
NEW CENTER FOR EMERGENCY SERVICES
#25 ROCKY HOLLOW ROAD
NORTH STONINGTON, CONNECTICUT

Job No. 14-01
Scale: As Noted
Date: 12/1/16
Designed: D.W.S.
Drawn: K.D.K.
Sheet: C6

EROSION CONTROL NOTES:

1. Land disturbance shall be kept to the minimum necessary for construction operations.
2. All soil erosion and sediment control measures must be constructed in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control by the Connecticut Council on Soil and Water Conservation in cooperation with the Connecticut Department of Environmental Protection.
3. Erosion and sediment control measures shall be installed as depicted on this plan, and maintained in an effective condition throughout the construction period. Additional measures shall be installed as necessary and required.
4. All disturbed areas shall be permanently stabilized as soon as practicable. Seed all disturbed areas with a temporary seed mixture within 7 days after the suspension of grading work in disturbed areas where the suspension of work is expected to be more than 30 days but less than 1 year.
5. Mr. Mark Perkins, Building Committee Chairman, 40 Main Street N. Stonington, CT 06359 860-625-1630, and the Site Contractor (to be determined) are assigned the responsibility for implementing the control measures of this plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of this plan, and notifying the Planning and Zoning Commission of the transfer of this responsibility, and for conveying a copy of this plan if title to the property is transferred.

GENERAL CONSTRUCTION SEQUENCE:

The anticipated time of completion for all aspects of construction is twelve (12) months from the initial start date.

The general sequence of work will be as follows and work may occur in more than one phase at any given time.

1. Notify "Call Before You Dig" (1-800-922-4455) and hold pre-construction meeting prior to any onsite activity. (Estimated Time: 3 days)
2. Install construction entrances and additional erosion control measures as indicated. Maintain all erosion and sediment control measures in an effective condition throughout the construction phase. (Estimated Time: 1 day)
3. Excavate for TST #1 & #2, Install temporary berms and ditches to direct runoff to TST. (Estimated Time: 3 days)
4. Strip and stockpile topsoil. Install silt fence around perimeter of stockpile areas and temporarily seed. (Estimated Time: 1 day)
5. Excavate for building footings and foundations, install footings and foundations and backfill. (Estimated Time: 30 days)
6. Begin building construction. (Estimated Time: 52 weeks)
7. Install on-site utilities (water, sewer, elec./tele/CATV & gas) (Estimated Time: 3 weeks)
8. Install new storm drainage and Storm Water Management Systems (SWMS). (Estimated Time: 4 weeks)
9. Install concrete curbing and sidewalks. (Estimated Time: 2 weeks)
10. Complete "boxing out" of parking lot and driveway areas, form shoulders and prepare subgrade for gravel base. (Estimated Time: 2 weeks)
11. Remove temporary sediment traps. (Estimated Time: 1 week)
12. Install gravel and processed aggregate roadway base courses. (Estimated Time: 10 days)
13. Install bituminous concrete pavement. (Estimated Time: 1 week)
14. Install parking and traffic markings and signage. (Estimated Time: 1 week)
15. Install landscape plantings and complete loaming and seeding of grass areas and all remaining disturbed areas as soon as practical. (Estimated Time: 10 days)

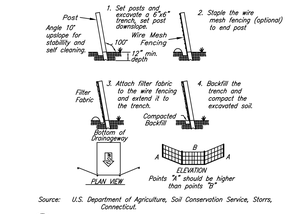
TEMPORARY SEDIMENT TRAP

CONSTRUCTION NOTES:

1. Excavate as needed to attain the necessary storage requirements.

MAINTENANCE NOTES:

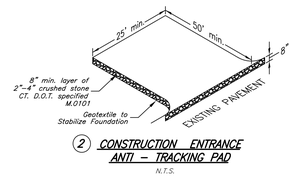
1. Inspect the temporary sediment trap at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater.
2. Check the outlet to ensure that it is structurally sound and has not been damaged by erosion or construction equipment.
3. Check for sediment accumulation and filtration performance.
4. When sediments have accumulated to one half the minimum required volume of the wet storage, dewater the trap as needed, remove sediments and restore the trap to its original dimensions. Dispose of the sediment removed from the basin in a suitable area and in such a manner that it will not erode and cause sedimentation problems.
5. The temporary sediment trap may be removed after the contributing drainage area is stabilized.



Source: U.S. Department of Agriculture, Soil Conservation Service, Storrs, Connecticut.

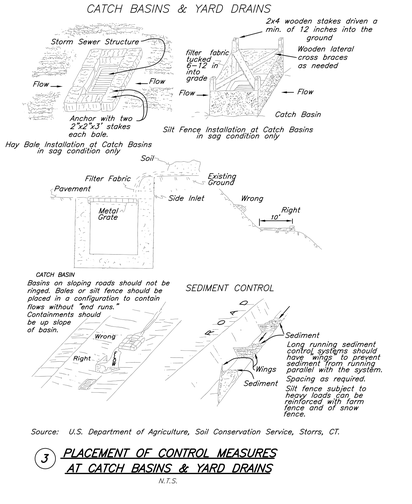
(1) PLACEMENT AND CONSTRUCTION OF A SYNTHETIC FILTER BARRIER

N.T.S.



(2) CONSTRUCTION ENTRANCE ANTI - TRACKING PAD

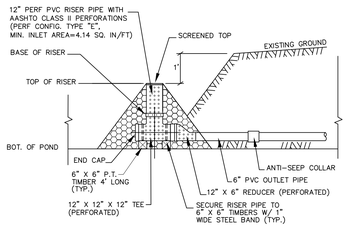
N.T.S.



Source: U.S. Department of Agriculture, Soil Conservation Service, Storrs, CT.

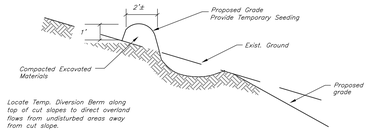
(3) PLACEMENT OF CONTROL MEASURES AT CATCH BASINS & YARD DRAINS

N.T.S.



(4) TEMPORARY SEDIMENT TRAP OUTLET RISER

N.T.S.



(5) TEMPORARY DIVERSION BERM

NOT TO SCALE

REVISIONS		
NO.	DESCRIPTION	DATE
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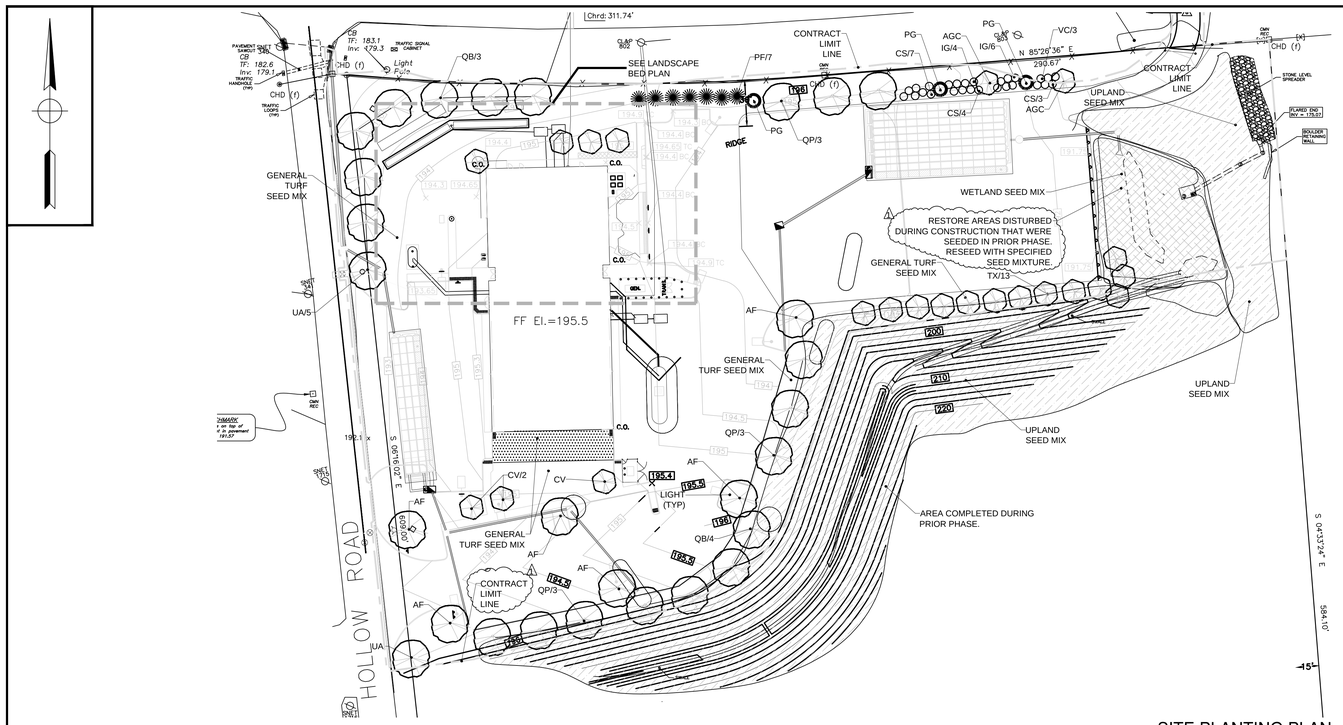
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EROSION CONTROL DETAILS

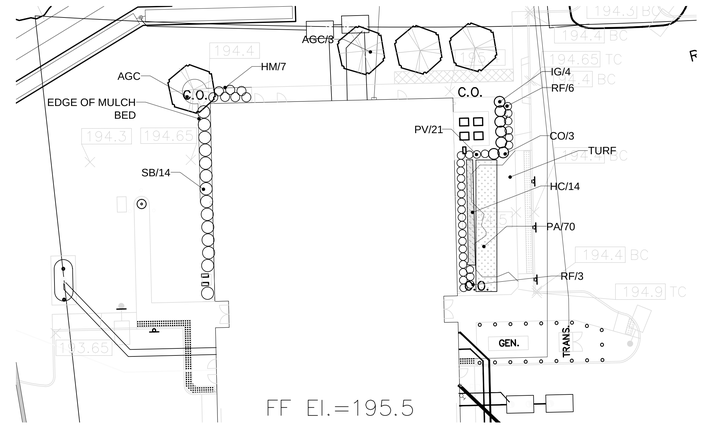
TOWN OF NORTH STONINGTON
NEW CENTER FOR EMERGENCY SERVICES
#25 ROCKY HOLLOW ROAD
NORTH STONINGTON, CONNECTICUT

Job No. 14-01
Scale: As Noted
Date: 12/1/16
Designed: D.W.S.
Drawn: K.D.K.
Sheet: C7



SITE PLANTING PLAN

SCALE: 1" = 40'



LANDSCAPE BED PLAN

SCALE: 1" = 20'

NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONSTRUCTION OPERATIONS WITHIN AND OUTSIDE THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS.
2. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED DUE TO CONSTRUCTION TO ORIGINAL CONDITION, AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL SUBSURFACE UTILITIES PRIOR TO THE START OF WORK. ANY FIELD CONDITIONS THAT DIFFER FROM THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND OWNER IMMEDIATELY.
4. THE CONTRACTOR SHALL NOT REMOVE TOPSOIL FROM THE SITE UNLESS DIRECTED SO BY THE OWNER.
5. THE CONTRACTOR SHALL NOT STOCKPILE MATERIALS NOR STORE CONSTRUCTION EQUIPMENT, NOR HAVE REGULAR ACCESS OR OCCUPY THE AREA WITHIN THE DRIPLINES OF TREES TO REMAIN.
6. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO CONN DOT FORM 816, LATEST EDITION, AS AMENDED, UNLESS OTHER SHOWN ON THE DRAWINGS OR SPECIFICATIONS HEREIN.
7. IF A DISCREPANCY EXISTS BETWEEN PLANT QUANTITIES AS SHOWN ON THE DRAWING AND IN THE PLANT LIST, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND INSTALLING THE QUANTITY IN THE PLANT LIST. REVIEW PLANTING LOCATIONS WITH THE LANDSCAPE ARCHITECT BEFORE INSTALLATION.
8. ALL REMAINING TURF / LANDSCAPED AREAS NOT NOTED ON THIS PLAN TO RECEIVE PLANTINGS OR SPECIFIC SEED MIX SHALL BE SEEDED WITH GENERAL TURF SEED MIX.
9. PROVIDE MINIMUM OF 6 INCHES TOPSOIL IN ALL AREAS TO BE LANDSCAPED AND SEEDED WITH GENERAL TURF SEED MIX.
10. ALL AREAS TO RECEIVE GENERAL TURF SEED MIX UNLESS OTHERWISE NOTED.

SOIL DECOMPACTION NOTES

1. THE CONTRACTOR SHALL DECOMPACT ALL SOILS WITHIN LANDSCAPE AREAS TO A MINIMUM DEPTH OF 24 INCHES. DECOMPACTION SHALL BE DONE IN A MANNER WITHOUT DISTURBING EXISTING TREE ROOTS, OR WITHIN THE DRIPLINE OF EXISTING TREES.
2. TO "SHATTER" OR "MIX" SOILS, THE CONTRACTOR MAY UTILIZE ROCK RIPPERS, SUBSOILERS, AND "WINGED" SUBSOILERS, PLOWS, SPADERS, AND ATTACHMENTS TO EXCAVATORS. METHODS WILL BE REVIEWED AND APPROVED BY LANDSCAPE ARCHITECT.
3. SOILS SHOULD NOT BE TOO MOIST DURING RIPPING, CAUSING TOO LITTLE SOIL SHATTER. SUBSOILING WHEN SOILS ARE EXTREMELY DRY CAN BRING UP LARGE BLOCKS OF SOILS, ESPECIALLY WHEN THE SOILS ARE HIGH IN CLAYS (COHESIVE SOILS). SOIL SHALL BE BROKEN DOWN TO FINISHED GRADE

WETLAND SEED MIX:

SPECIES: FOX SEDGE, (CAREX VULPINOIDEA), LURID SEDGE, (CAREX LURIDA), BLUNT BROOM SEDGE, (CAREX SCOPARIA), SENSITIVE FERN, (ONOCLEA SENSIBILIS), BLUE VERVAIN, (VERBENA HASTATA), HOP SEDGE, (CAREX LUPULINA), GREEN BULRUSH, (SCIRPUS ATROVIRENS), NODDING BUR MARIGOLD, (BIDENS CER-NUA), BRISTLY SEDGE, (CAREX COMOSA), FRINGED SEDGE, (CAREX CRINITA), AMERICAN MANNAGRASS, (GLYCERIA GRANDIS), WOOL GRASS, (SCIRPUS CYPERINUS), SOFT RUSH, (JUNCUS EFFUSUS), SPOTTED JOE PYE WEED, (EUPATORIUM MACULATUM), BONESET, (EUPATORIUM PERFOLIATUM), MUD PLANTAIN, (ALISMA SUBCORDATUM), NEW ENGLAND ASTER, (ASTER NOVAE-ANGLIAE), RATTLESNAKE GRASS, (GLYCERIA CANADENSIS), PURPLESTEM ASTER (ASTER PUNICEUS), SOFT STEM BULRUSH, (SCIRPUS VALIDUS), BLUEFLAG (IRIS VERSICOLOR), SWAMP MILKWEED, (ASCLEPIAS INCARNATA), MONKEY FLOWER, (MIMULUS RINGENS). THE FUNCTIONALITY OF EACH MIX WILL REMAIN UNCHANGED, ALTHOUGH MIX COMPOSITION MAY VARY DURING THE YEAR.
APPLICATION RATE: 1 POUND / 2,500 SQUARE FEET

UPLAND SEED MIX:

GRASSES

VIRGINIA WILD RYE (ELYMUS VIRGINICUS), LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), CREEPING RED FESCUE (FESTUCA RUBRA), BIG BLUESTEM (ANDROPOGON GERARDII), INDIAN GRASS (SORGHASTRUM NUTANS), SWITCH GRASS (PANICUM VIRGATUM)

WILDFLOWERS

PARTRIDGE PEA (CHAMAECRISTA FASCICULATA), BUTTERFLY MILKWEED (ASCLEPIAS TUBEROSA), GOLDEN ALEXANDERS (ZIZIA AUREA), SMOOTH BLUE ASTER (ASTER LAEVIS), BUSH CLOVER (LESPEDEZA CAPITATA), PURPLE JOE PYE WEED (EUPATORIUM PURPUREUM), WILD BERGAMOT (MONARDA FISTULOSA), GREEN HEADED CONEFLOWER (RUDBECKIA LACINIATA), GRASS LEAVED GOLDENROD (EUTHAMIA GRAMINIFOLIA), NEW ENGLAND ASTER (ASTER NOVAE-ANGLIAE), EARLY GOLDENROD (SOLIDAGO JUNCEA)

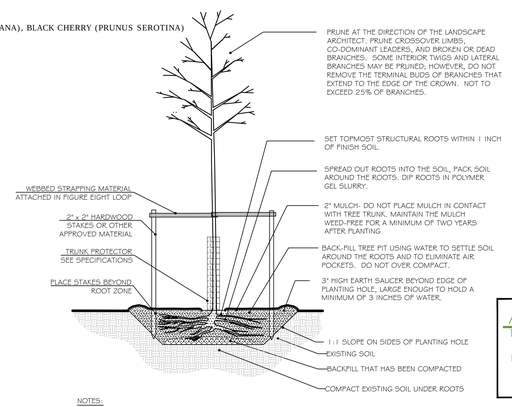
SHRUBS

RED-OSIERDOGWOOD (CORNUS SERICEA), STAGHORN SUMAC (RHUS TYPHINA), WITCH HAZEL (HAMAMELIS VIRGINIANA), BLACK CHERRY (PRUNUS SEROTINA)

APPLIATION RATE: 1 POUND / 1,250 SQUARE FEET

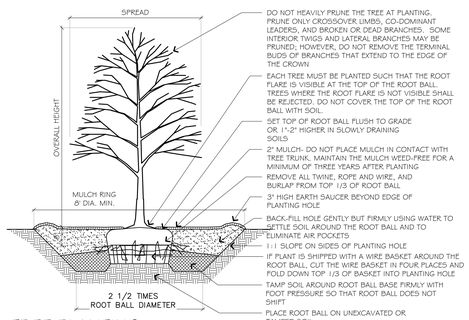
PLANT LIST

Quantity	Symbol	Botanical name	Common Name	Misc.	Size	notes
		TREES				
6	AF	*Acer x freemanii 'Autumn Blaze'*	Autumn Blaze Hybrid Maple	7' Branch Ht.	*2 1/2" - 3" CAL.*	B&B
6	AGC	*Amelanchier grandiflora 'Autumn Brilliance'*	Serviceberry	B&B	*6'-7' HT.*	Clump Form
3	CV	*Chionanthus virginicus*	White Fringetree		1 1/2" - 2" CAL.	B&B
3	PG	*Picea glauca*	White Spruce		*6'-7' HT.*	B&B
7	PF	*Pinus flexilis 'Vanderwolf'*	Limber Pine		*6' / 7' HT*	B&B
7	QB	*Quercus bicolor*	Swamp White Oak	Own Root #15 Cont. Accetable	*2" CAL.*	Bare Root Branched
9	QP	*Quercus palustris*	Pin Oak	Own Root #15 Cont. Accetable	*2" CAL.*	Bare Root Branched
13	TX	*Taxodium distichum*	Common Baldcypress	Native Restoration	*6' HT.*	#2 Cont. - attached surveyors flag to top of stem
6	UA	*Ulmus americana 'New Harmony'*	American Elm		2 1/2" - 3" CAL.	B&B
		SHRUBS				
3	CO	*Chamaecyparis obtusa 'Nana Gracilis'*	Dwarf Slender Hinoki Cypress	#3 Cont.	36" Height	
14	CS	*Cornus sericea 'Baileyi'*	Red Osier Dogwood	#2 Cont.		
14	IG	*Ilex glabra'Shamrock'*	Inkberry	3 Gallon		42" O.C.
14	SB	*Spirea bumalda 'gold Flame'*	Bumalda Spirea	#2 Cont.		
3	VC	*Viburnum cassinoides*	Witherod Viburnum	#3 Cont.		
		PERENNIALS / GRASSES				
14	HC	*Hemerocallis 'Chicago Apache'*	Red Daylilly	#1 cont.	30" O.C.	
24	HM	*Hakonechloa macra 'Ben Kaze'*	Hakone Grass Ben Kaze	#1 cont.	18" O.C.	
21	PV	Panicum virgatum 'Shenandoah'	Switch Grass	1 Gallon		reaches 36" height +/-
70	PA	*Pennisetum alopecuroides 'Piglet'*	Dwarf Fountain Grass	1 Gallon	24" O.C	reaches 18" height +/-
9	RF	*Rudbeckia fulgida var sullivantii 'Goldsturm'*	Coneflower	1 Gallon		



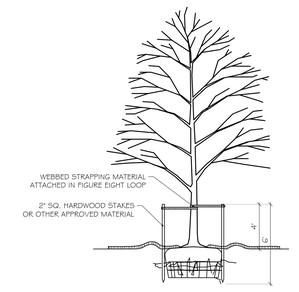
NOTES:
-ALL STAKES SHALL BE DRIVEN OUTSIDE THE EDGE OF THE ROOT PACKAGE.
-STAKES SHALL BE REMOVED NO LATER THAN 1-YEAR AFTER ACCEPTANCE BY THE L.A.

BARE ROOT TREE PLANTING
NTS



TREE PLANTING
NTS

NOTE: THIS DETAIL ASSUMES THAT THE PLANTING SPACE IS LARGER THAN 8' SQUARE, OPEN TO THE SKY, AND NOT COVERED BY ANY PAVING OR GRATING.



STAKING FOR TREES 3" CALIPER OR LESS

NOTES:
-ALL STAKES SHALL BE DRIVEN OUTSIDE THE EDGE OF THE ROOT BALL.
-WIRE OR CABLE SIZES SHALL BE AS FOLLOWS: -TREES UP TO 2.5" CALIPER - 14 GAUGE. -TREES 2-1/2" TO 3" CALIPER - 12 GAUGE
-TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE 1-1/2" OF GROWTH AND BUFFER ALL BRANCHES FROM THE WIRE.
-TUCK ANY LOOSE ENDS OF THE WIRE OR CABLE INTO THE WIRE WRAP SO THAT NO SHARP WIRE ENDS ARE EXPOSED.
-INSTALL THREE GUY WIRES PER TREE, SPACED EVENLY AROUND THE TRUNK.
-STAKES SHALL BE REMOVED NO LATER THEN THE END OF THE FIRST GROWING SEASON AFTER PLANTING.

TREE STAKING
NTS

Aris Land Studio
1450 Barnum Avenue
Suite 201
Bridgeport, CT 06610
203.606.3130
www.ArisLS.com

GRAPHIC SCALE:

0' 20' 40' 60' 80'

REVISIONS		
NO.	DESCRIPTION	DATE
1	CLL AND SCOPE	1-5-17
2	ISSUED FOR BIDDING	2-10-17

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LANDSCAPE' PLAN

TOWN OF NORTH STONINGTON
CENTER FOR EMERGENCY SERVICES
#25 ROCKY HOLLOW ROAD
NORTH STONINGTON, CONNECTICUT

Job No. 14-309
Scale: 1"=40'
Date: 12/1/2016
Designed: A.W.S.
Drawn: C.A.D.
Sheet: L1

SYMBOL LEGEND

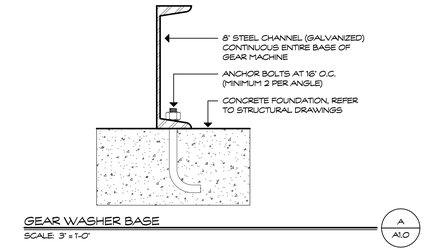
- NEW METAL STUD PARTITIONS
- NEW CMU WALL
- DOOR NUMBER
- WINDOW TYPE
- ROOM NAME / ROOM NUMBER
- PARTITION TYPE
- CONSTRUCTION NOTE
- ELEVATION/SECTION NUMBER / SHEET NUMBER
- WALL SECTION / DETAIL NUMBER / SHEET NUMBER
- ELEVATION NUMBER / SHEET NUMBER
- F.E.C. – FIRE EXTINGUISHER CABINET (RECESSED ALL LOCATIONS)
- H.D.F. – HANDICAPPED DRINKING FOUNTAIN
- FD – FLOOR DRAIN - SLOPE TILE TO DRAIN

GENERAL NOTES

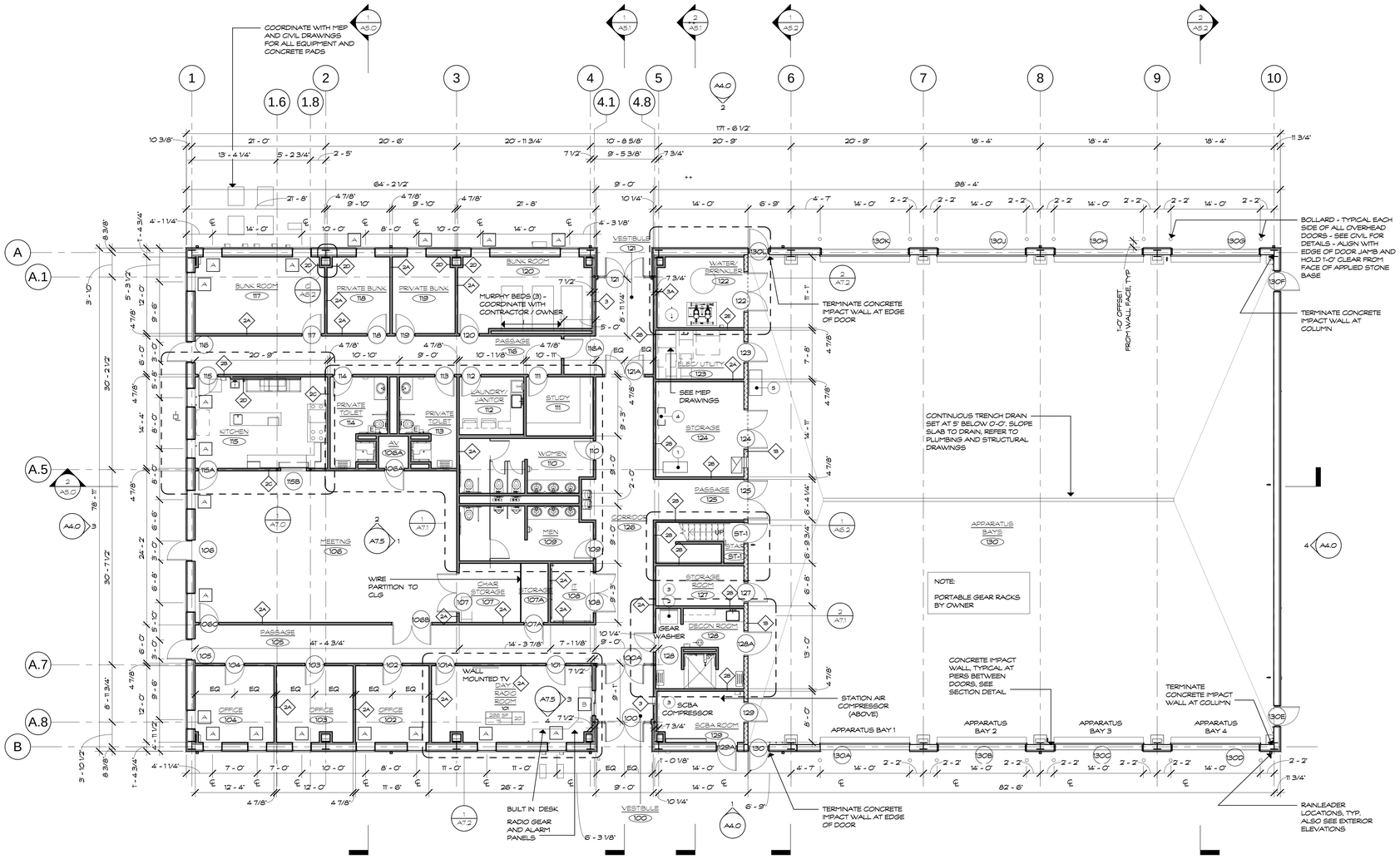
1. READ ALL GENERAL NOTES ON DRAWING A0.1.
2. CONTRACTORS SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS.
3. ALL DIMENSIONS ARE TO FACE OF CONCRETE MASONRY UNITS AND METAL FRAMING UNLESS OTHERWISE NOTED.
4. ALL NEW WALL AND PARTITION ASSEMBLIES SHALL EXTEND TO UNDERSIDE OF DECK UNLESS OTHERWISE NOTED.
5. PROVIDE CMU WITH PRE-MANUFACTURED (OR FIELD ROUTED) BULLNOSE AT ALL EXPOSED CORNERS.

CONSTRUCTION NOTES

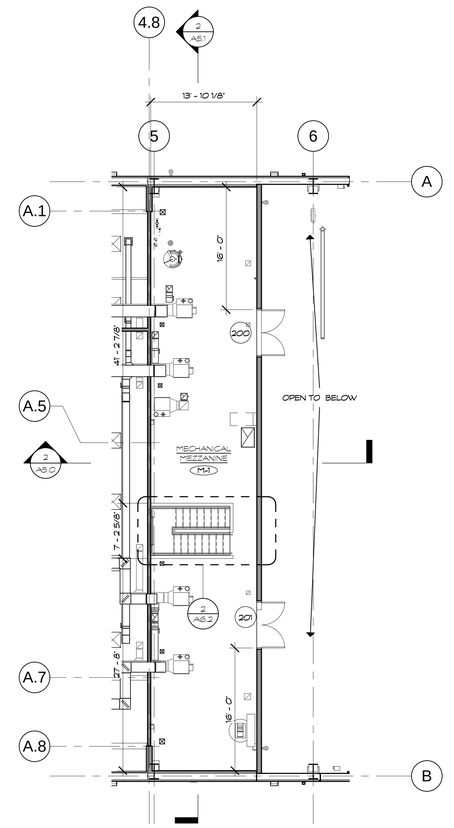
No.	NOTE
1	HOSEGEAR DRYER (N.I.C.) - CONTRACTOR TO PROVIDE 12' LOUVERED WALL CAP, REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION
2	CONTRACTOR TO PROVIDE 8' STEEL BASE AS INDICATED IN DETAIL A/A1.0. COORDINATE SIZE w/ MODEL No. AND OWNER (CONTINENTAL - EM128)
3	EQUIPMENT IS EXISTING (SCBA COMPRESSOR, GEAR WASHER, STATION SIREN & STATION AIR COMPRESSOR) EQUIPMENT IS TO BE DISCONNECTED, RELOCATED AND INSTALLED BY CONTRACTOR. CURRENT EQUIPMENT RESIDES AT EXISTING FIRE STATION. CONTRACTOR TO COORDINATE MOVING, SCHEDULE AND FINAL LOCATION OF EQUIPMENT w/ NSVFC.
4	FLAMMABLE LIQUID STORAGE CABINET (PROVIDED BY OWNER - N.I.C.) CONTRACTOR TO INSTALL, VENT, AND PROPERLY GROUND.
5	METAL WALL MOUNTED SLOPED DESK WITH DRAWER - (BASIS OF DESIGN - GLOBAL INDUSTRIAL ITEM # WG634177BL)



GEAR WASHER BASE
SCALE: 3" = 1'-0"



MAIN LEVEL PLAN
SCALE: 1/8" = 1'-0"



MECHANICAL ATTIC PLAN
SCALE: 1/8" = 1'-0"

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title: FLOOR PLANS

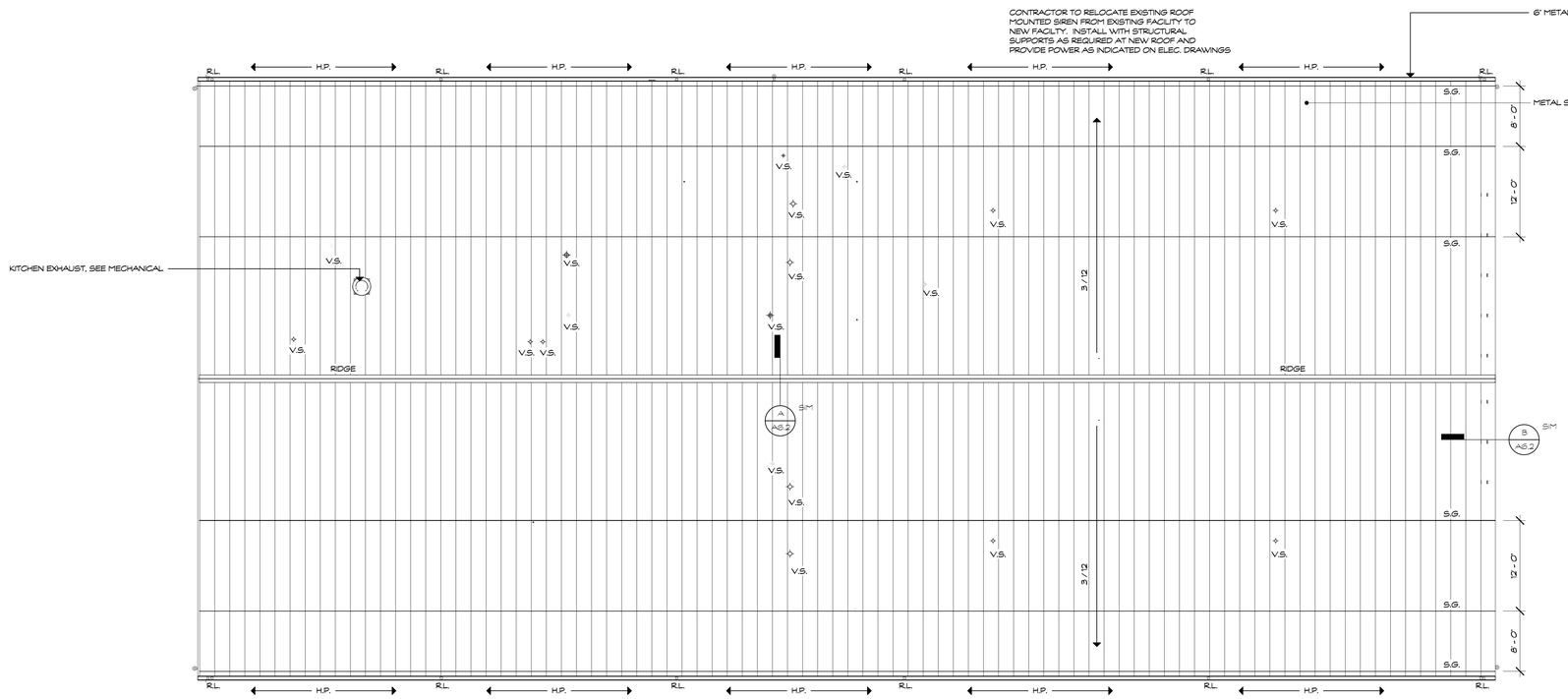
100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: BJV
Project Number: 13.220

Drawing Number: A1.0

SYMBOL LEGEND

- X / XX — PLAN, SECTION, DETAIL OR ELEVATION NUMBER-SHEET NUMBER
- SLOPE — INDICATES SLOPE DIRECTION OF TAPERED INSULATION @ 1/4"/ 1'-0"
- V.S. — VENT STACK - CENTER HORIZONTALLY WITHIN METAL PANEL ROOF (BETWEEN STANDING SEAMS)
- R.L. — 3" x 4" ROOF LEADER - PROVIDE CAST IRON BOOT EXTENDING 12" MIN. ABOVE GRADE
- S.G. — SNOW GUARD RAIL - REFER TO PROJECT MANUAL
- H.P. — HIGH POINT



NORTH

ROOF PLAN
SCALE: 1/8" = 1'-0"

1
A2.0

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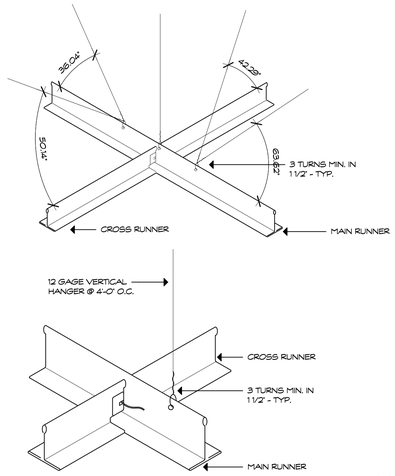
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Drawing Title:
ROOF PLAN

100% CD Submission

Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: BJV
Project Number: 13.220

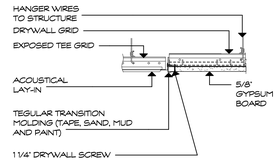
Drawing Number:
A2.0



SEISMIC BRACING

SCALE: NOT TO SCALE

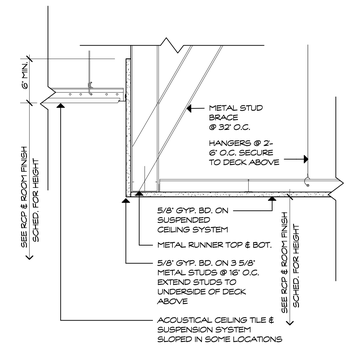
A / A3.0



SUSPENDED GYPSUM BOARD TO ACT FLUSH TRANSITION

SCALE: 1½" = 1'-0"

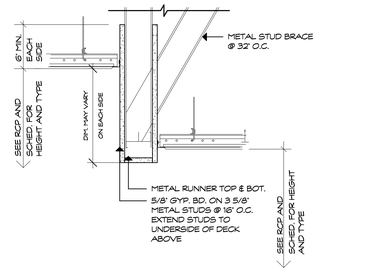
B / A3.0



SOFFITED CEILING TRANSITION ACT TO GYP

SCALE: 1½" = 1'-0"

C / A3.0



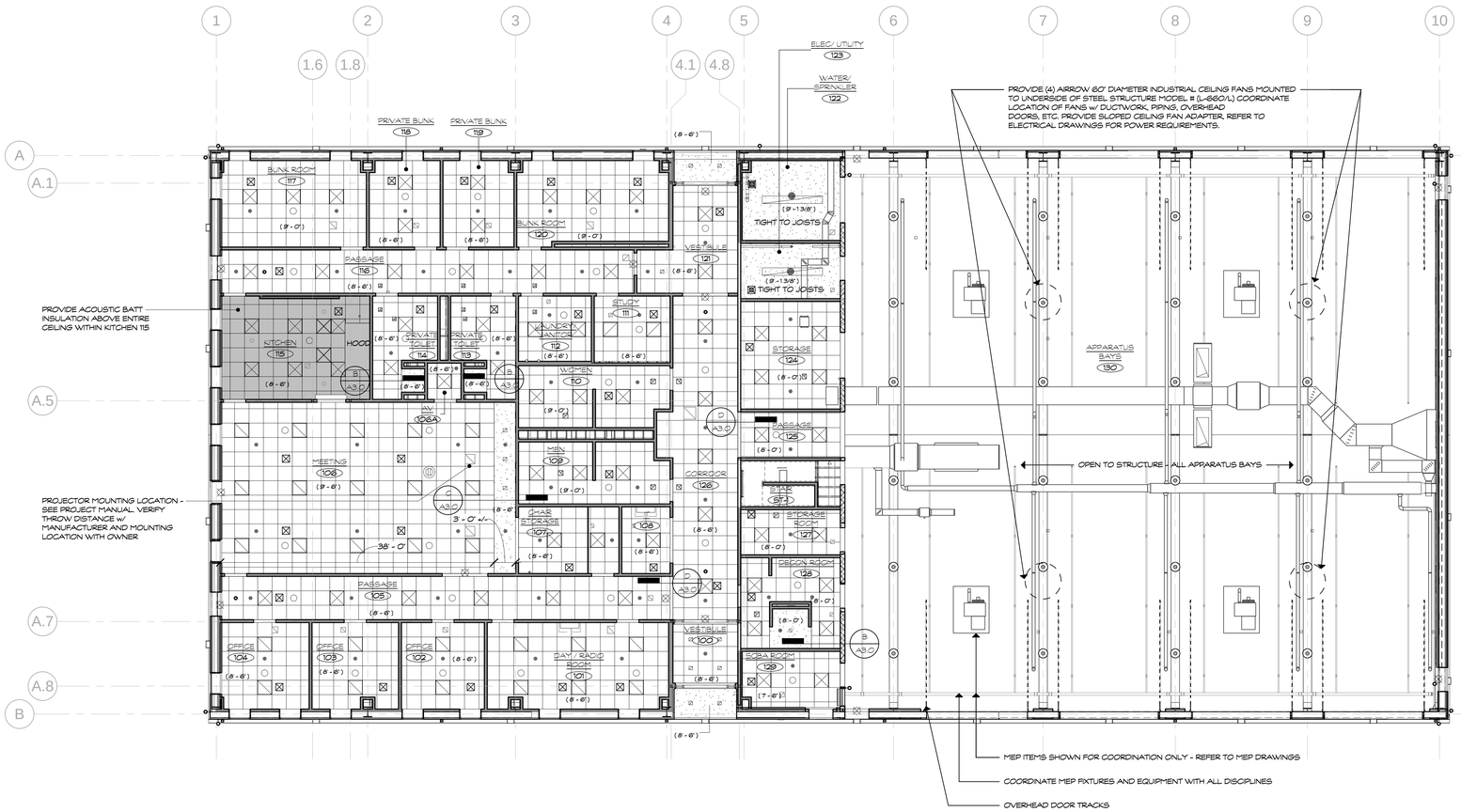
SOFFITED CEILING TRANSITION

SCALE: 1½" = 1'-0"

D / A3.0

R.C.P. SYMBOL LEGEND

- 2' x 2' ACOUSTICAL CEILING TILE & GRID w/ SUPPORTS
- PAINTED GYPSUM BOARD CEILING
- RECESSED LIGHT FIXTURES REFER TO ELECTRICAL DWGS.
- 2' x 2' LIGHT FIXTURE REFER TO ELECTRICAL DWGS.
- PENDANT STYLE LIGHT FIXT. REFER TO ELECTRICAL DWGS.
- SUPPLY DIFFUSER REFER TO MECHANICAL DWGS.
- RETURN GRILLE REFER TO MECHANICAL DWGS.
- CONCEALED SPRINKLER HEAD REFER TO FIRE PROT. DWGS.
- EXPOSED SPRINKLER HEAD REFER TO FIRE PROT. DWGS.
- (10'-0") CEILING HEIGHT
- (X) CONSTRUCTION NOTE
- C / A3.0 ELEVATION/SECTION NUMBER - SHEET NUMBER
- C / A3.0 SECTION DETAIL NUMBER - SHEET NUMBER

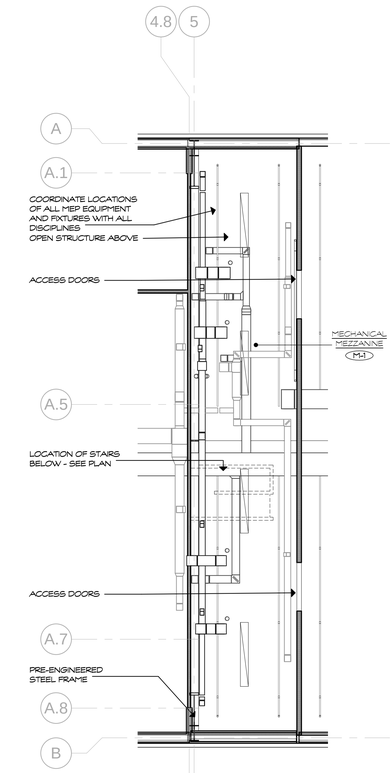


NORTH

MAIN LEVEL RCP

SCALE: 1/8" = 1'-0"

1 / A3.0



NORTH

MECHANICAL ATTIC RCP

SCALE: 1/8" = 1'-0"

2 / A3.0

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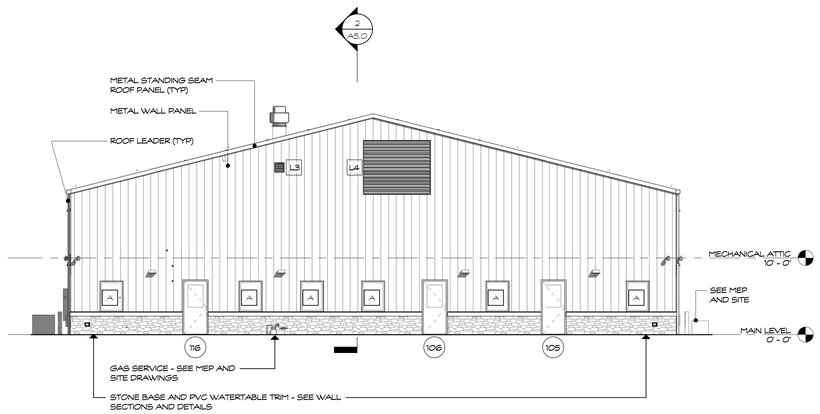
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
REFLECTED CEILING PLANS

Date: 12/1/16
Scale: As indicated
Drawn By: BJV
Project Number: 13.220

Drawing Number: A3.0

100% CD Submission

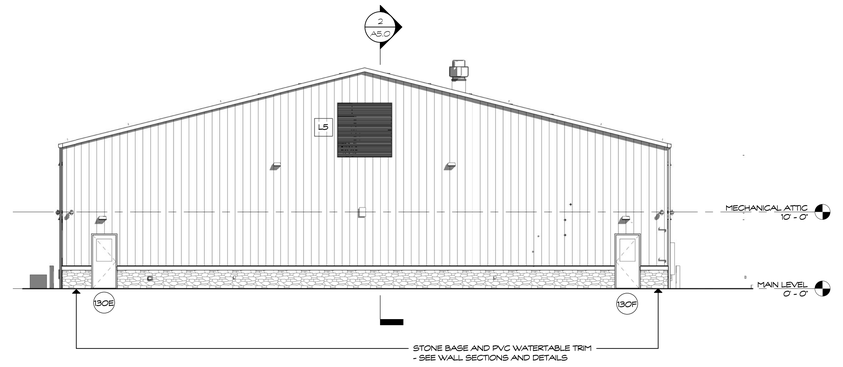


NOTE:

ELEVATION OF WINDOW SILLS TO DETERMINE LOCATION OF WATERTABLE TRIM AND STONE BASE. ALL WINDOW SILLS TO ALIGN TO SAME ELEVATION ABOVE FINISHED FLOOR TO PERMIT INSTALLATION OF PC STONE WATER TABLE TRIM AND STONE BASE AS SHOWN. SEE WALL SECTION AND WINDOW SILL DETAIL.

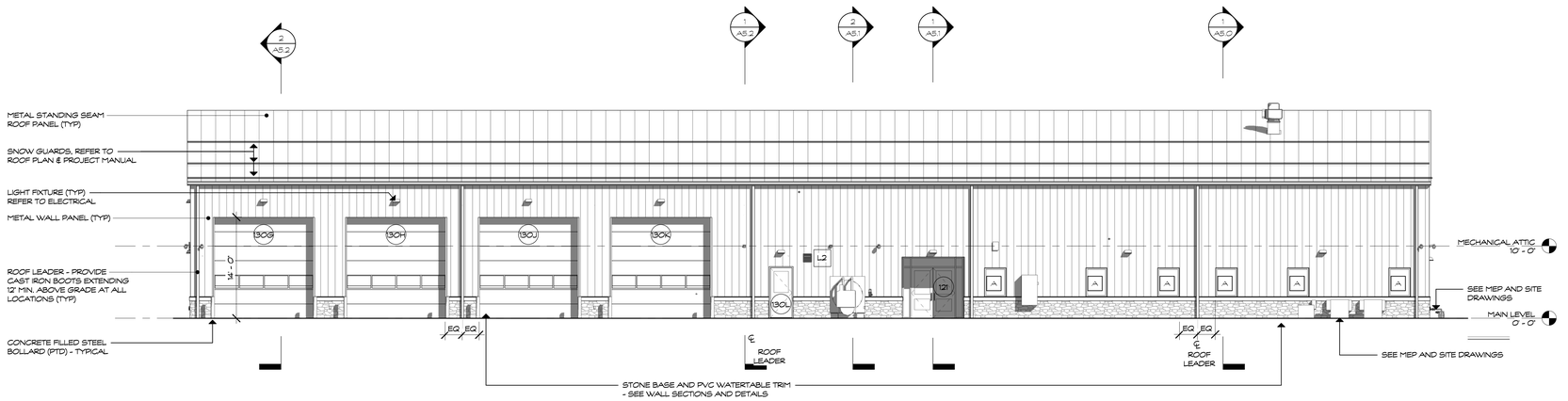
EXTERIOR ELEVATION - NORTH
SCALE: 1/8" = 1'-0"

3 / A4.0



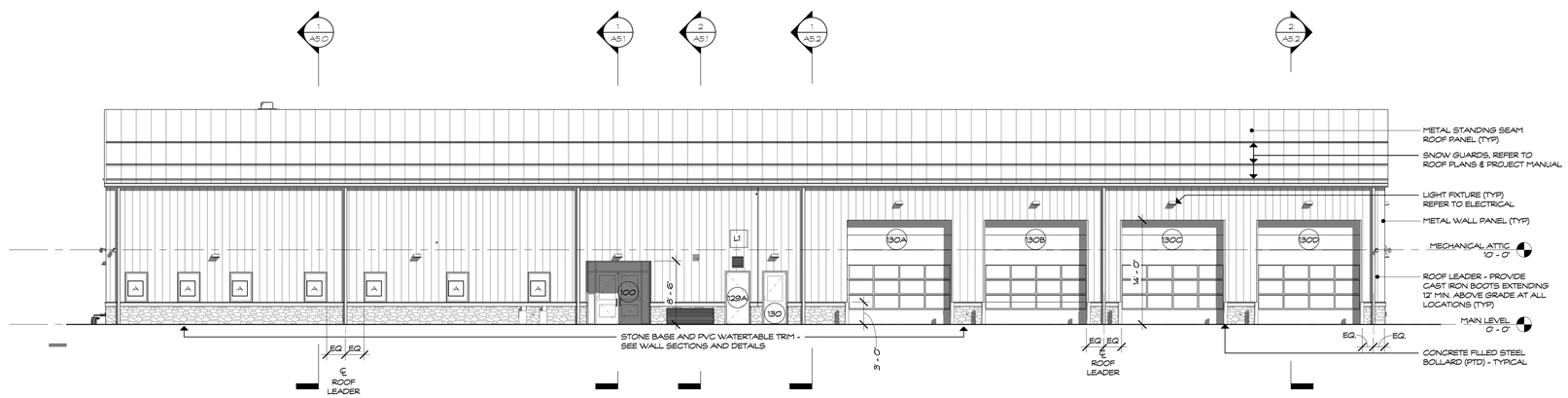
EXTERIOR ELEVATION - SOUTH
SCALE: 1/8" = 1'-0"

4 / A4.0



EXTERIOR ELEVATION - EAST
SCALE: 1/8" = 1'-0"
REFERENCE VIEW: 1 / A1.0

2 / A4.0



EXTERIOR ELEVATION - WEST
SCALE: 1/8" = 1'-0"
REFERENCE VIEW: 1 / A1.0

1 / A4.0

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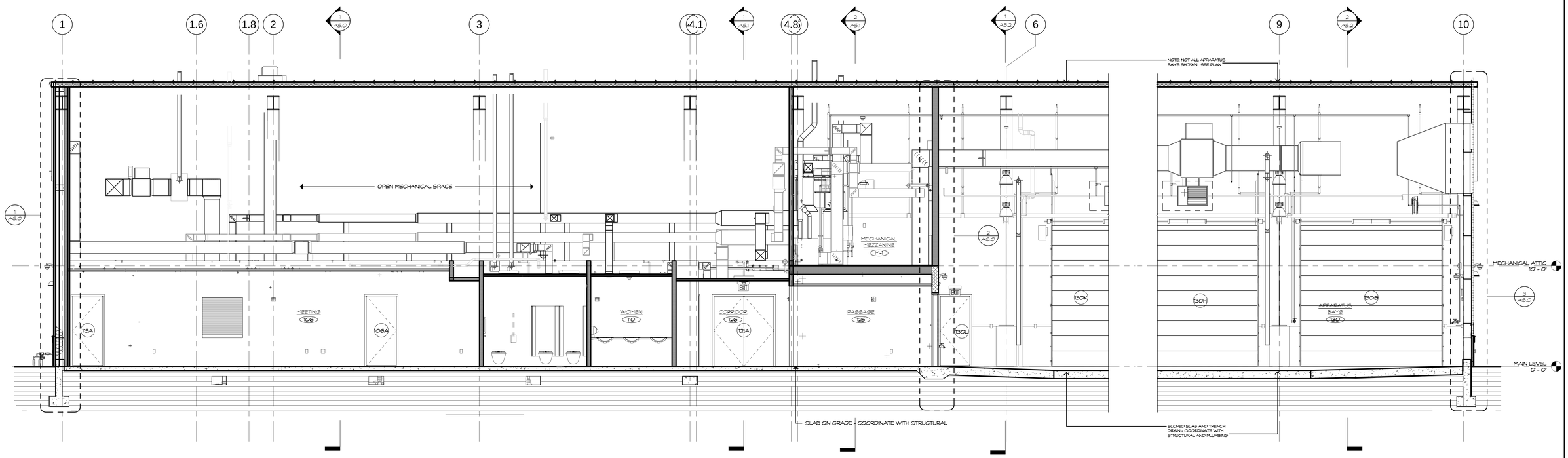
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REV 1	100% CD Submission	1/5/17	
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Drawing Title:
EXTERIOR ELEVATIONS

100% CD Submission

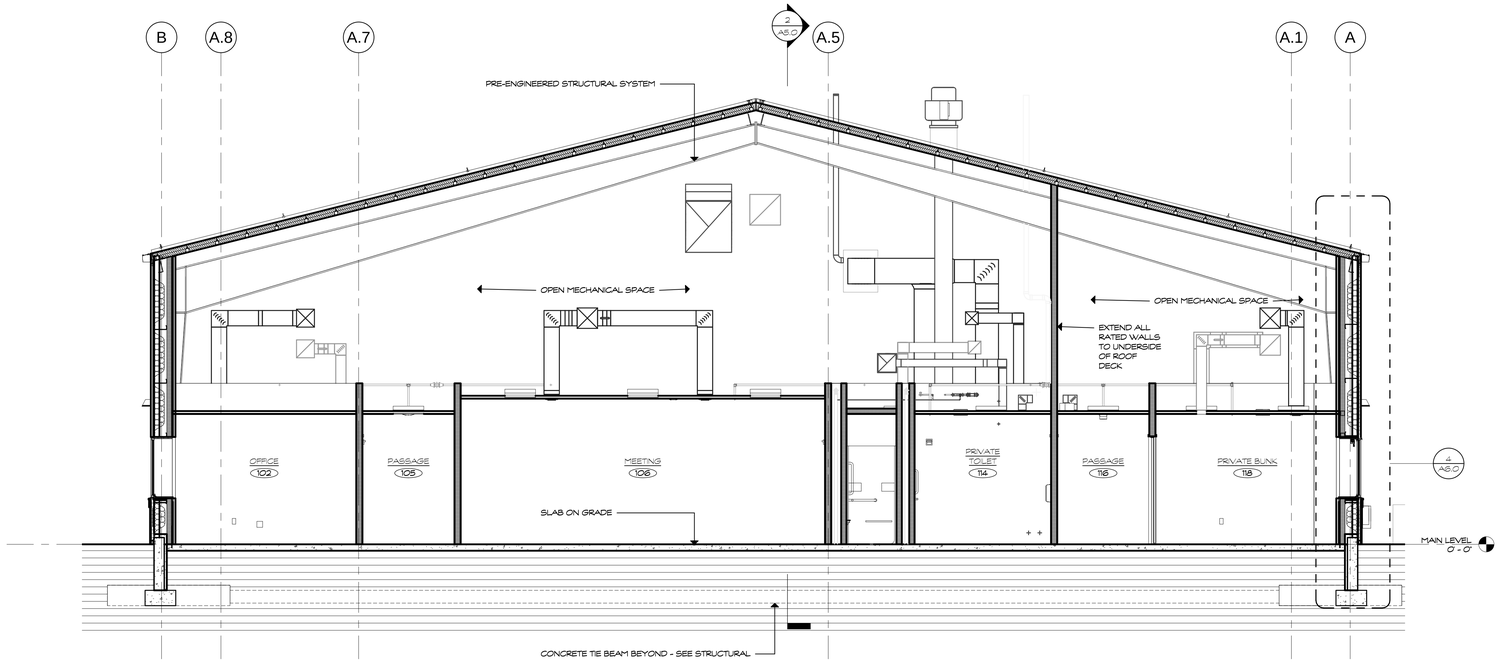
Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: BJV
Project Number: 13.220

Drawing Number:
A4.0



NORTH - SOUTH SECTION

SCALE: 1/4" = 1'-0" — REFERENCE VIEW: 1 / A1.0



EAST WEST SECTION 1

SCALE: 1/4" = 1'-0" — REFERENCE VIEW: 1 / A1.0

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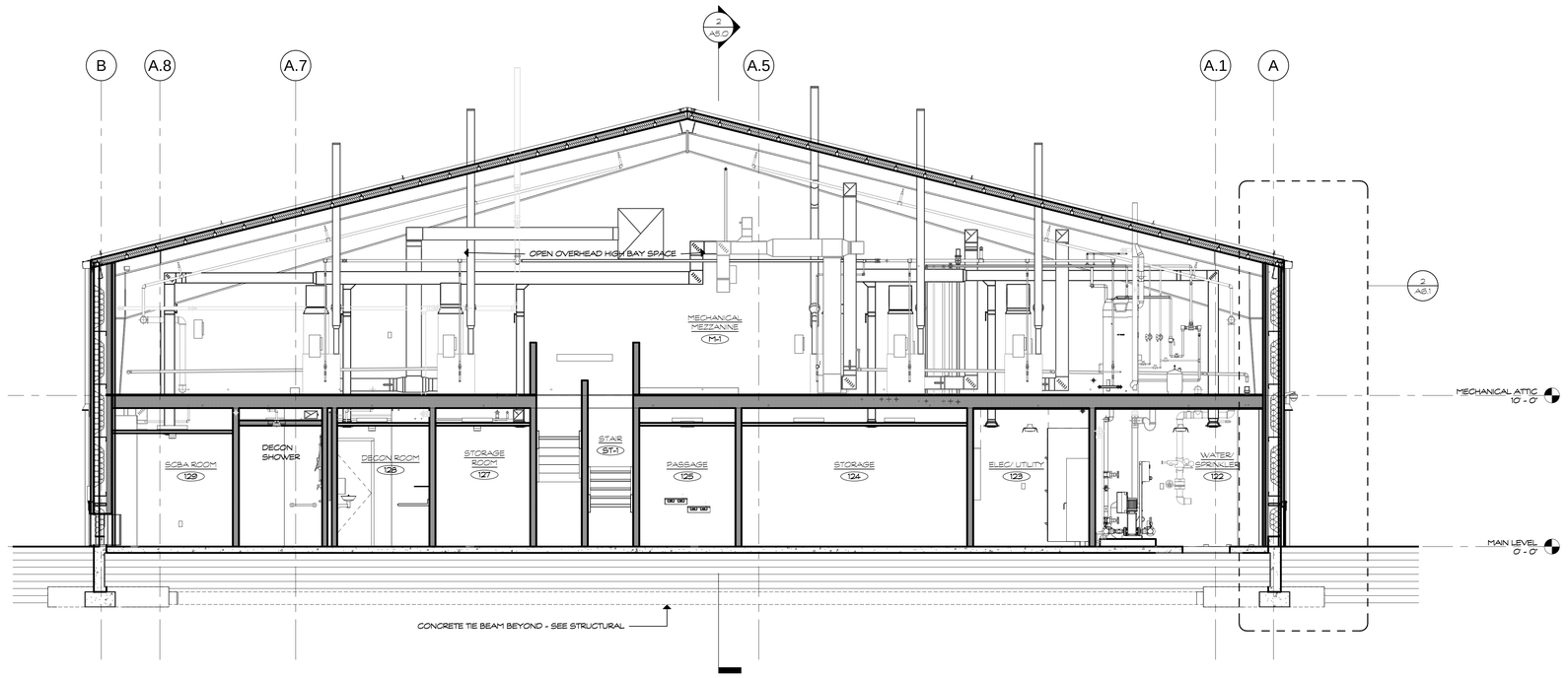
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
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Drawing Title:
BUILDING SECTIONS

100% CD Submission

Date: 12/1/16
Scale: 1/4" = 1'-0"
Drawn By: BJV
Project Number: 13.220

Drawing Number: A5.0

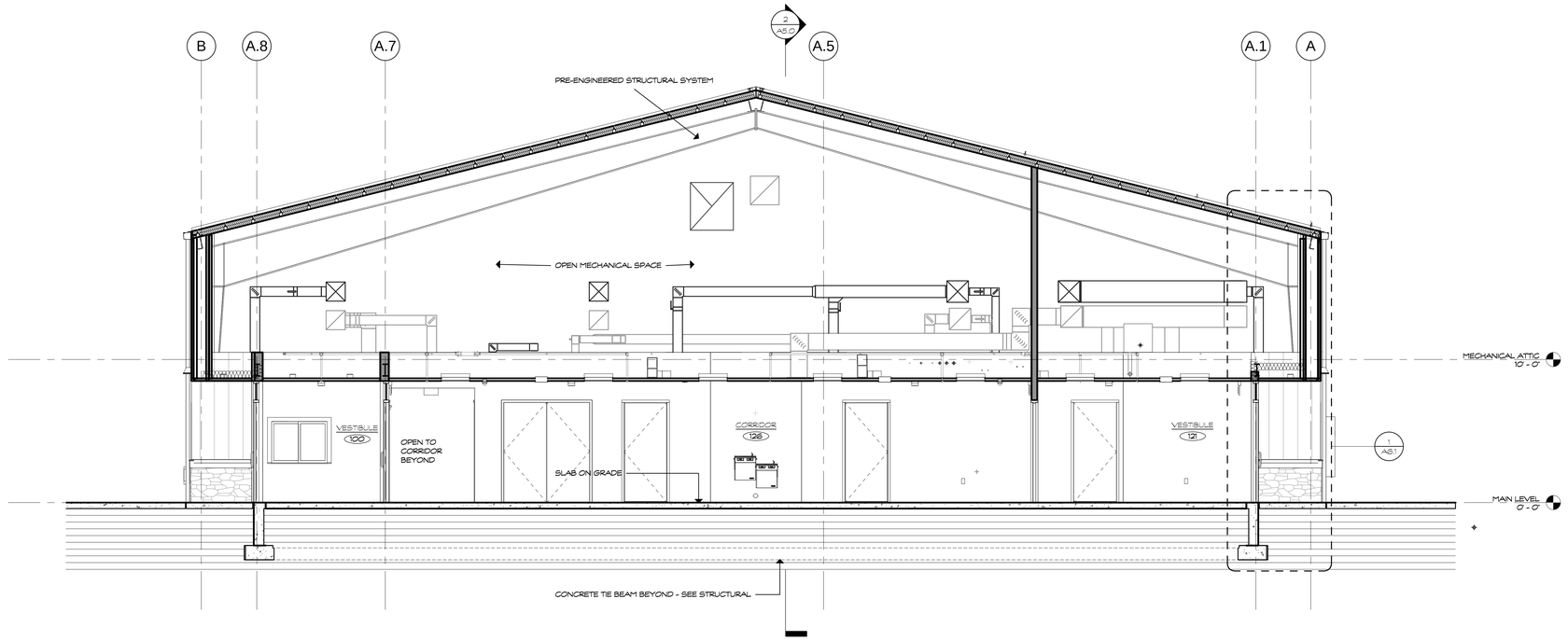


EAST WEST SECTION 3

SCALE: 1/4" = 1'-0"

REFERENCE VIEW: 1 / A1.0

2
A5.1



EAST WEST SECTION 2

SCALE: 1/4" = 1'-0"

REFERENCE VIEW: 1 / A1.0

1
A5.1

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Drawing Title:

BUILDING SECTIONS

100% CD Submission

Date: 12/1/16

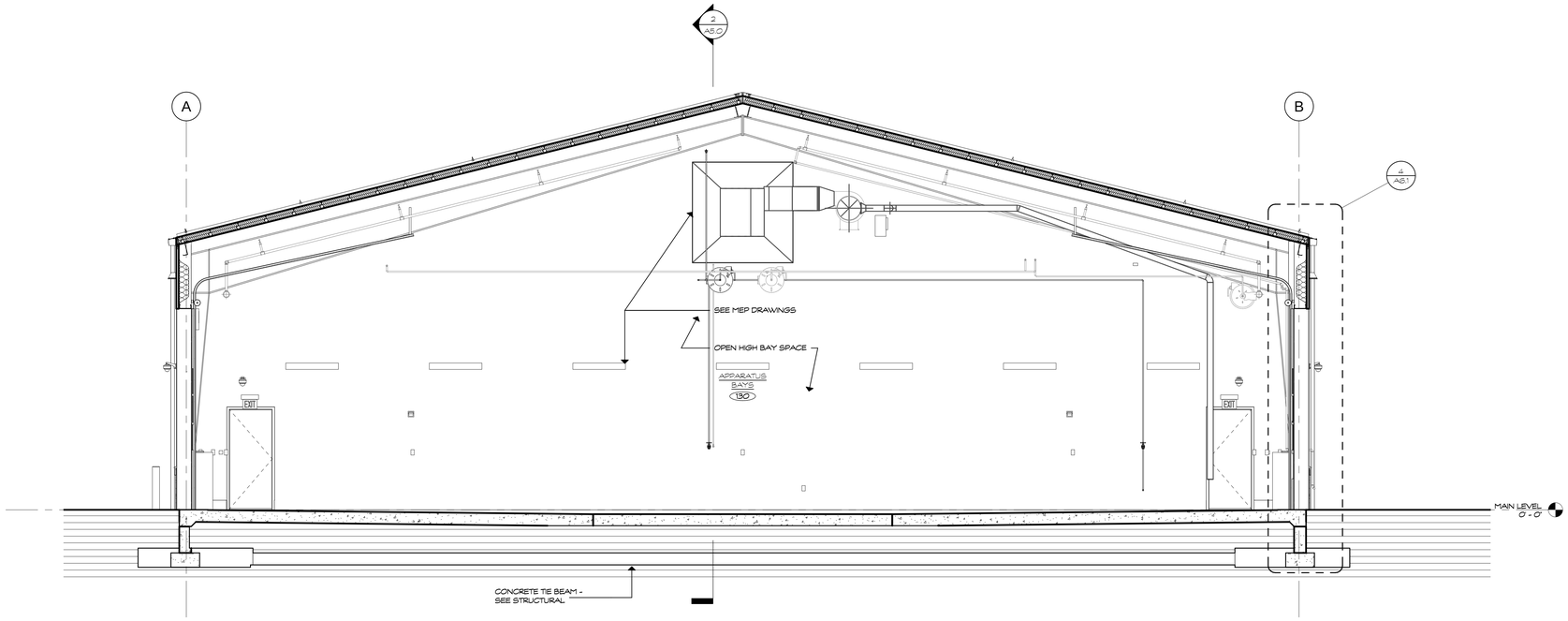
Scale: 1/4" = 1'-0"

Drawn By: BJV

Project Number: 13.220

Drawing Number:

A5.1

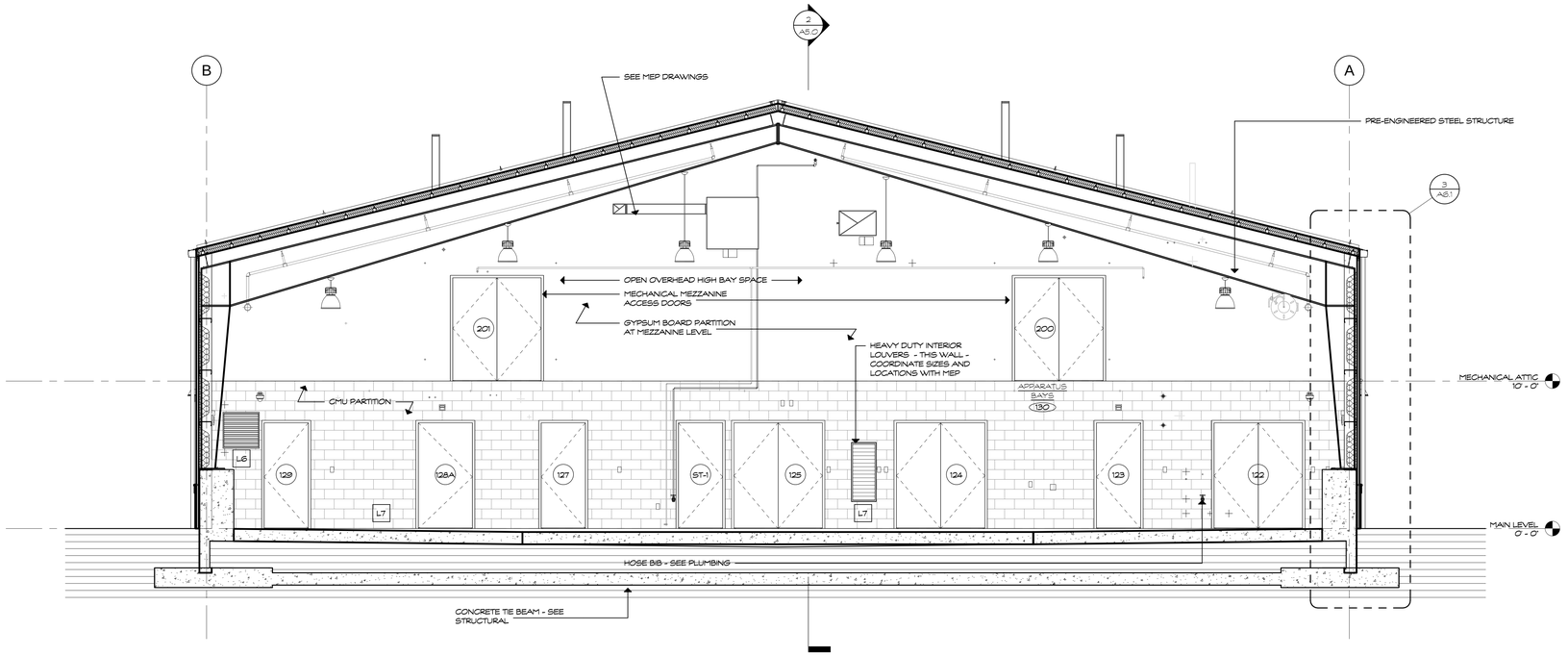


EAST WEST SECTION 5

SCALE: 1/4" = 1'-0"

REFERENCE VIEW: 1 / A1.0

2 / A5.2



EAST WEST SECTION 4

SCALE: 1/4" = 1'-0"

REFERENCE VIEW: 1 / A1.0

1 / A5.2

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Drawing Title:

BUILDING SECTIONS

100% CD Submission

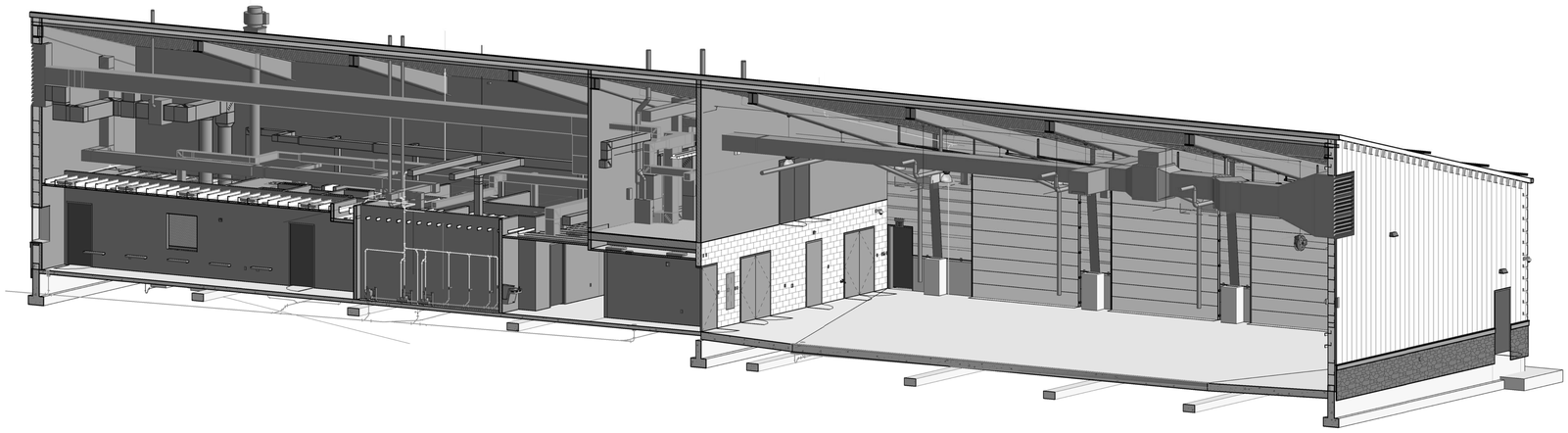
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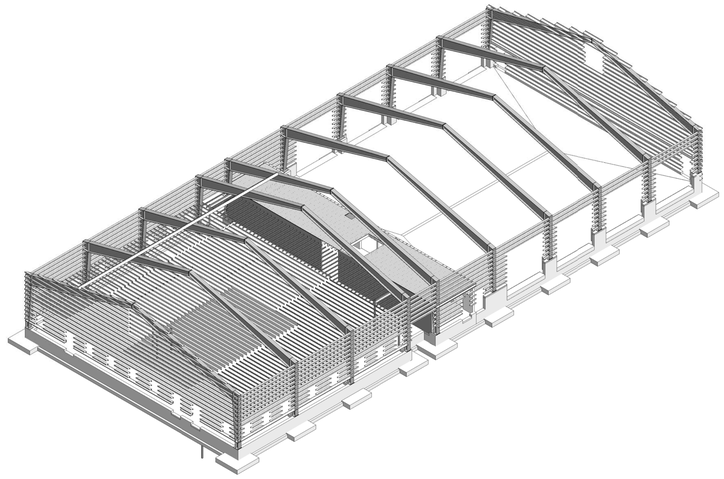
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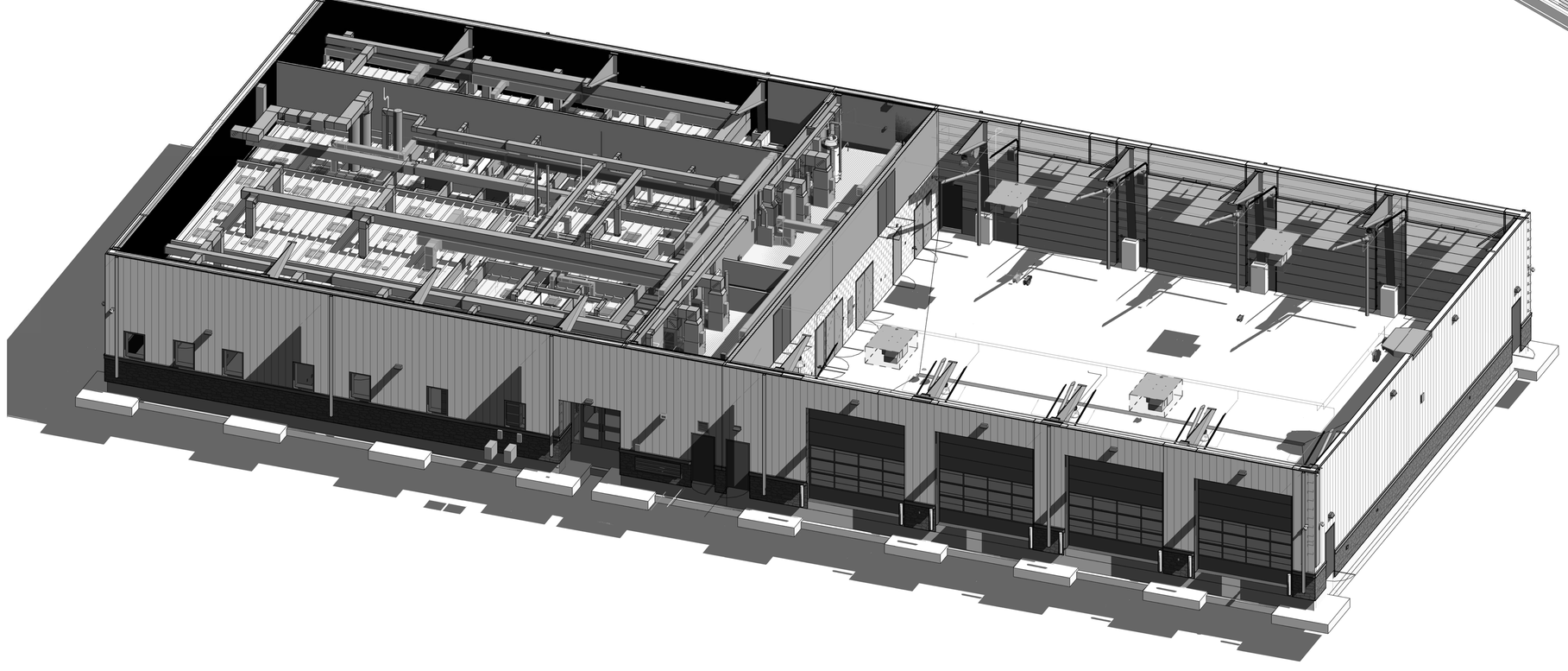
Drawn By: BJV

Project Number: 13.220

Drawing Number: A5.2







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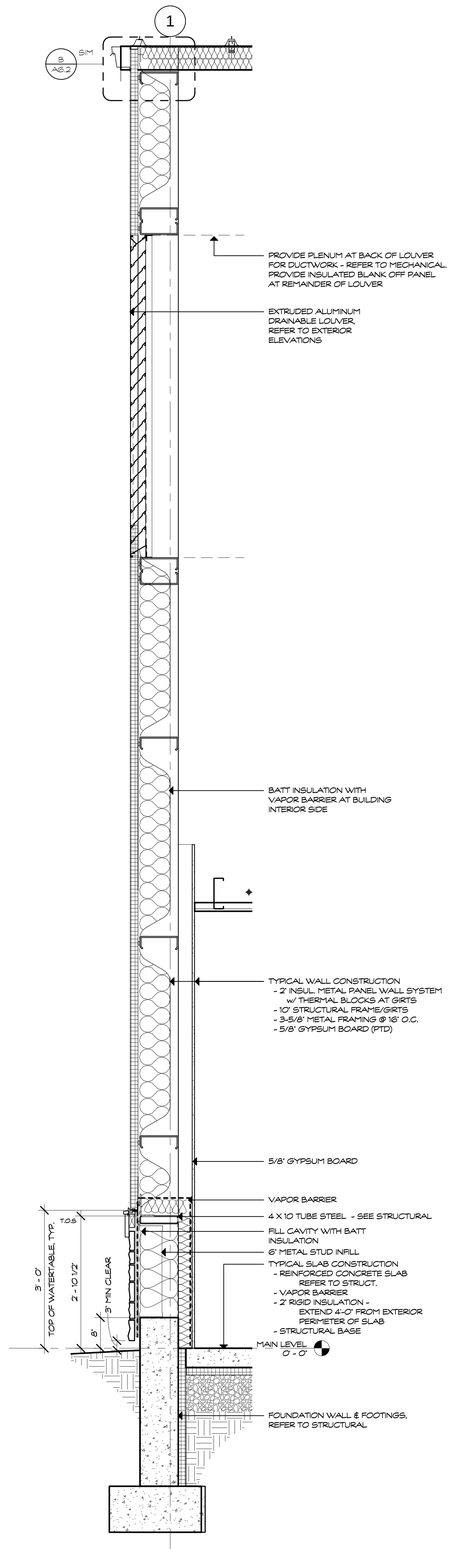
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REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
3D SECTIONS - REFERENCE ONLY

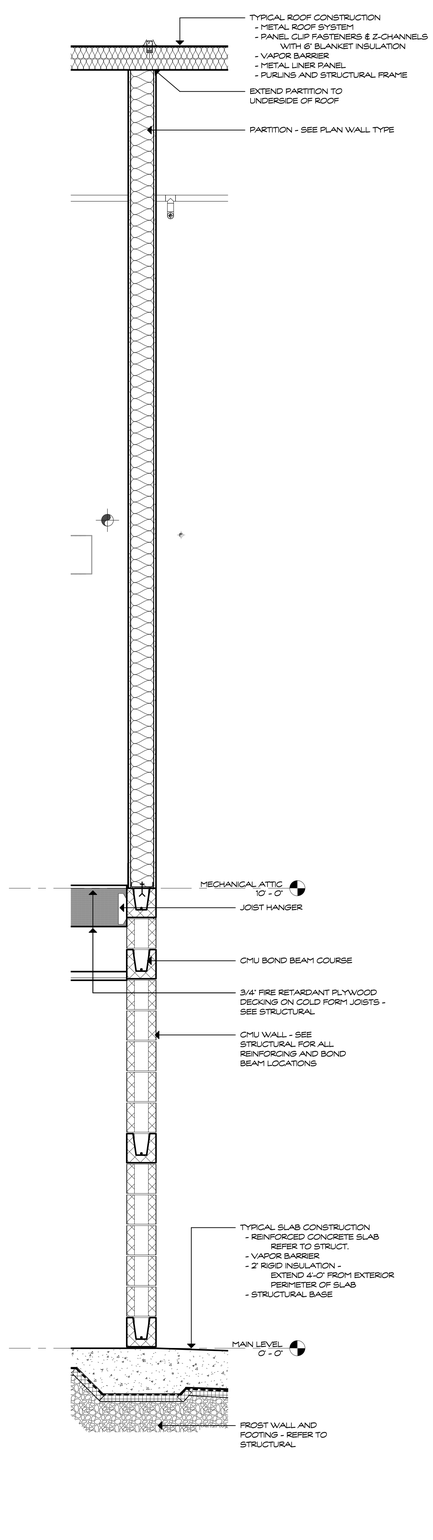
100% CD Submission

Date: 12/1/16
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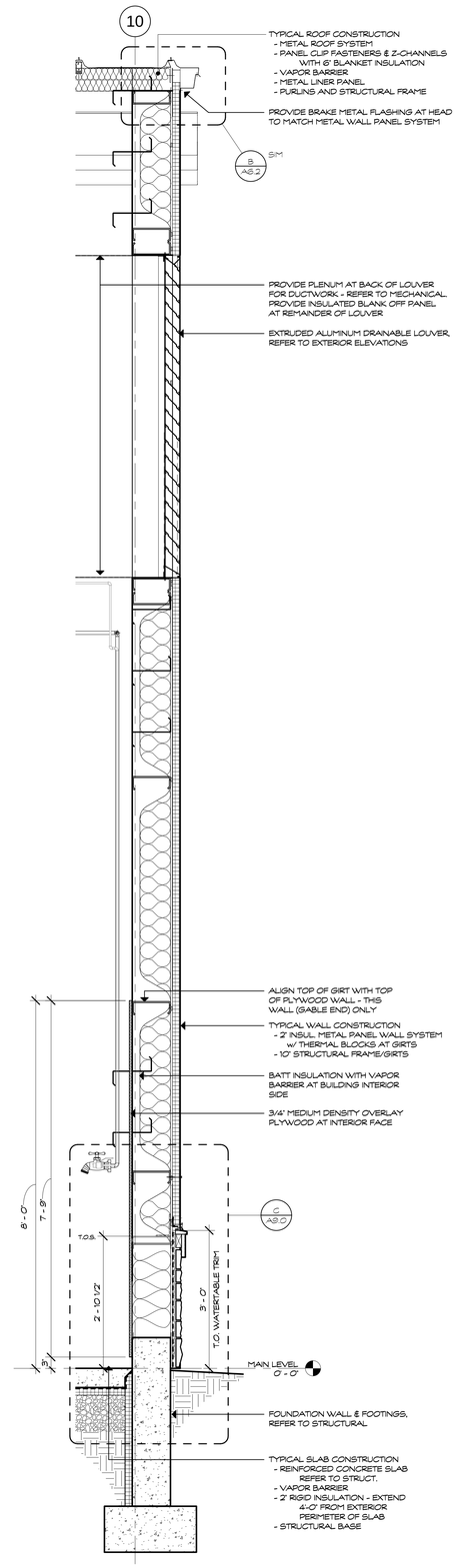
Drawing Number:
A5.3



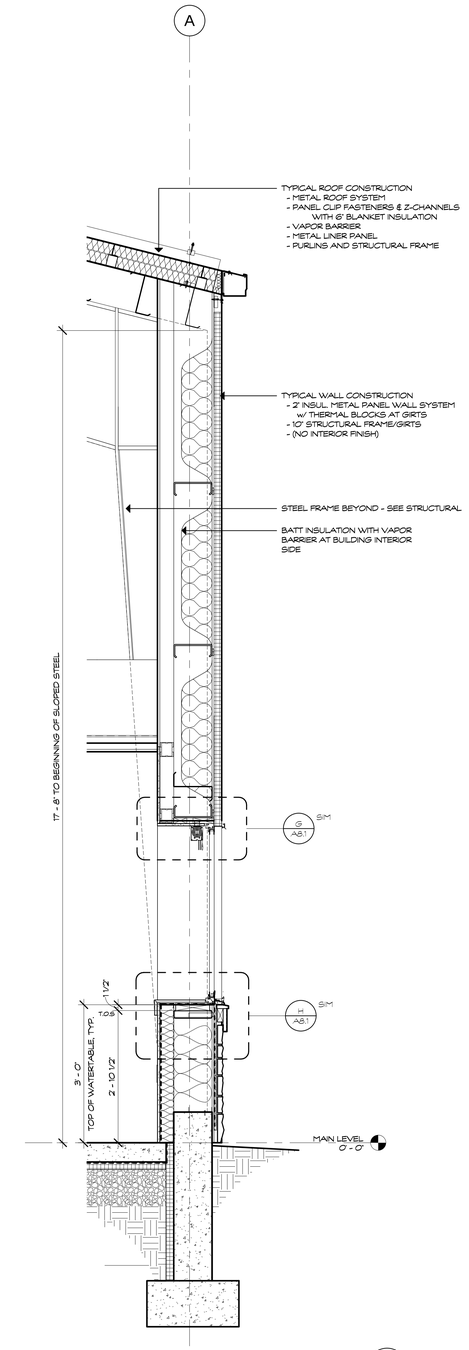
WALL SECTION 1
SCALE: 3/4" = 1'-0"
REFERENCE VIEW: 2 / A5.0 — 1 / A5.0



WALL SECTION 2
SCALE: 3/4" = 1'-0"
REFERENCE VIEW: 2 / A5.0 — 2 / A6.0



WALL SECTION 3 - END WALL
SCALE: 3/4" = 1'-0"
REFERENCE VIEW: 2 / A5.0 — 3 / A5.0



WALL SECTION 4
SCALE: 3/4" = 1'-0"
REFERENCE VIEW: 1 / A5.0 — 4 / A6.0

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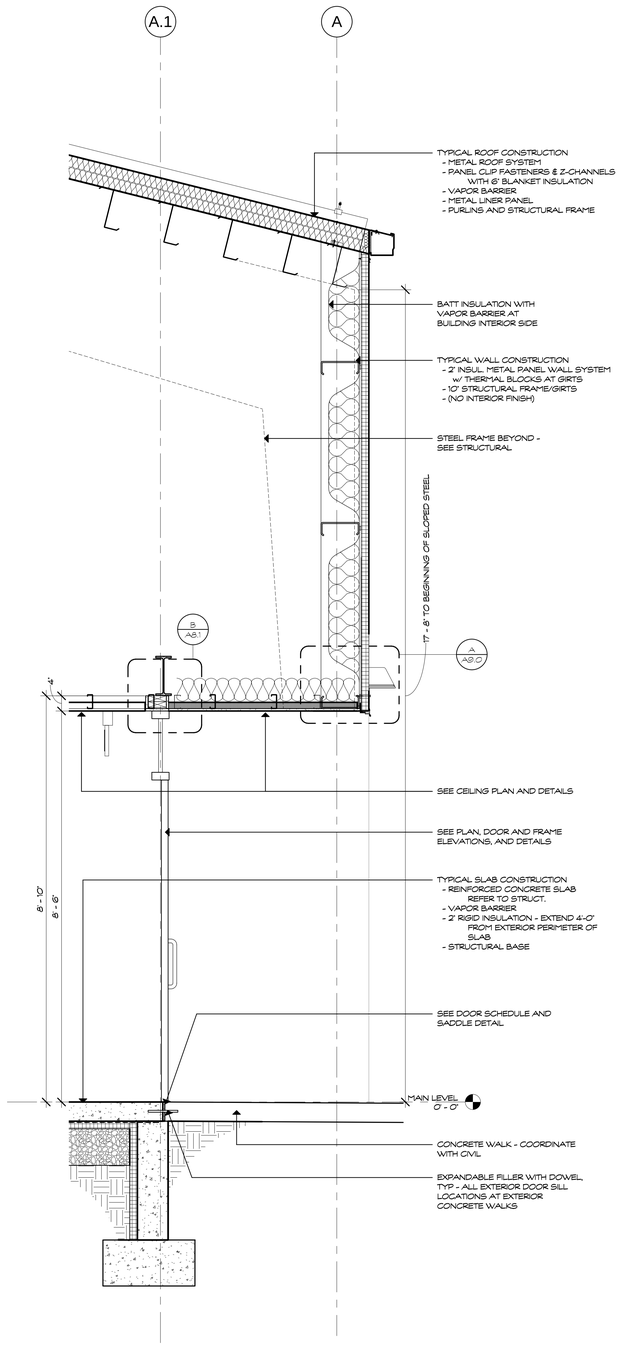
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Drawing Title:
WALL SECTIONS

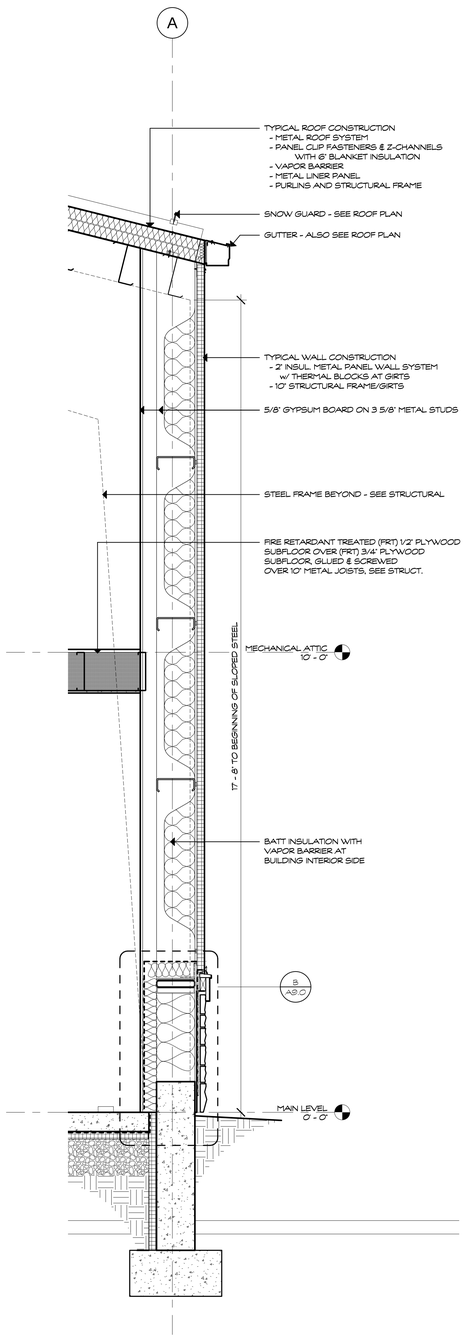
Date: 12/1/16
Scale: 3/4" = 1'-0"
Drawn By: BJV
Project Number: 13.220

Drawing Number: A6.0

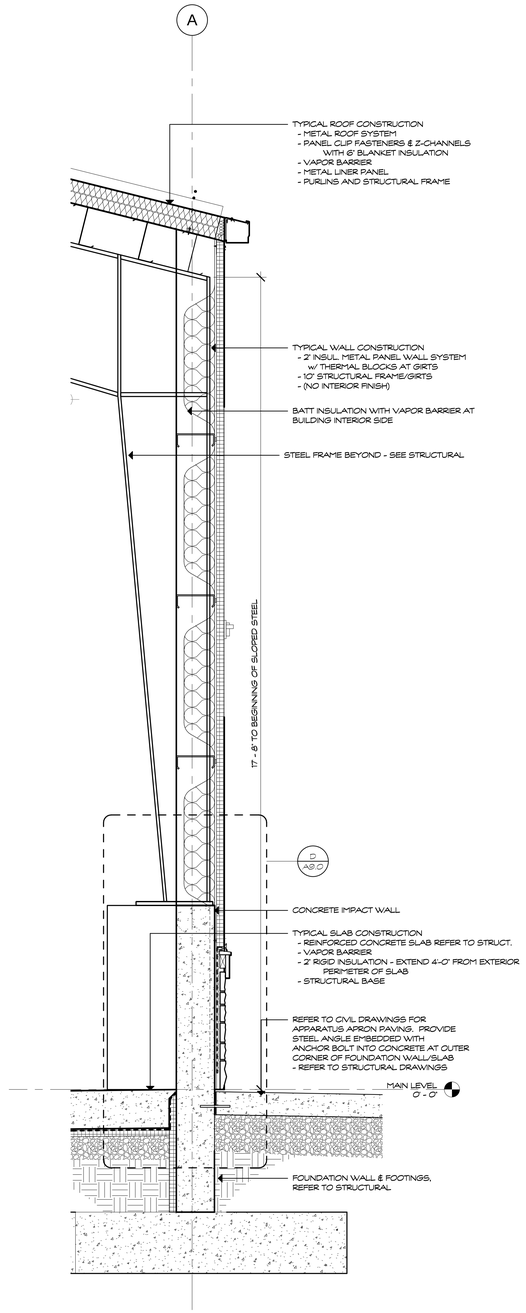
100% CD Submission



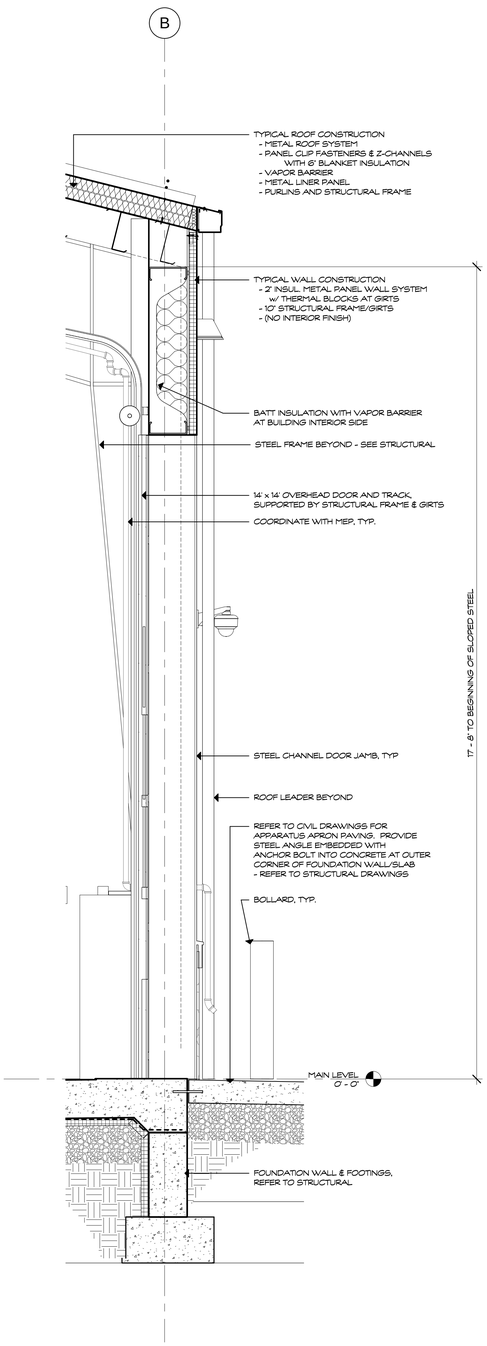
WALL SECTION 5
SCALE: 3/4" = 1'-0" REFERENCE VIEW: 1 / A5.1 — 1 / A6.1



WALL SECTION 6
SCALE: 3/4" = 1'-0" REFERENCE VIEW: 2 / A5.1 — 2 / A6.1



WALL SECTION 7
SCALE: 3/4" = 1'-0" REFERENCE VIEW: 1 / A5.2 — 3 / A6.1



WALL SECTION 8
SCALE: 3/4" = 1'-0" REFERENCE VIEW: 2 / A5.2 — 4 / A6.1

Project Title:
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Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

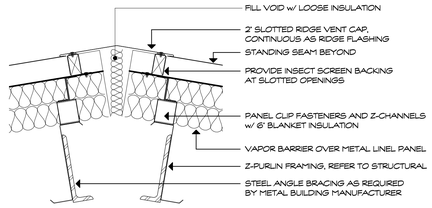
Drawing Title:
WALL SECTIONS

100% CD Submission

Date: 12/1/16
Scale: 3/4" = 1'-0"
Drawn By: BJV
Project Number: 13.220

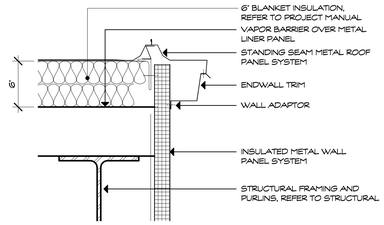
Drawing Number:
A6.1

NOTE: ALL FASTENERS, SEALANTS, FLASHINGS, ETC. AS RECOMMENDED/REQUIRED BY METAL BUILDING MANUF.

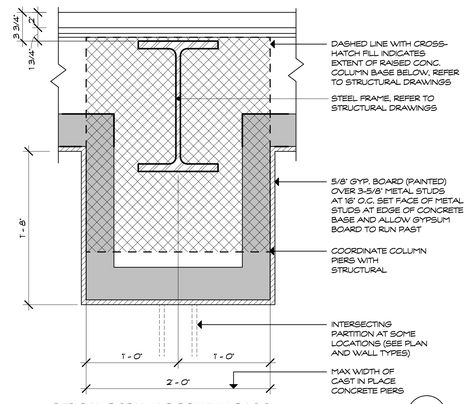


RIDGE DETAIL — SCALE: 1 1/2" = 1'-0" — REFERENCE VIEW: 1 / A2.0 — A / A6.2

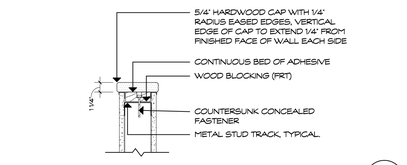
NOTE: ALL FASTENERS, SEALANTS, FLASHINGS, ETC. AS RECOMMENDED/REQUIRED BY METAL BUILDING MANUF.



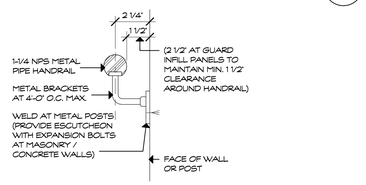
ENDWALL EAVE DETAIL — SCALE: 1 1/2" = 1'-0" — REFERENCE VIEW: 1 / A2.0 — B / A6.2



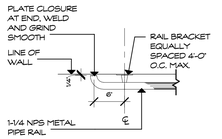
TYPICAL DETAIL AT COLUMN BASE — SCALE: 1 1/2" = 1'-0" — REFERENCE VIEW: 1 / A1.0 — C / A6.2



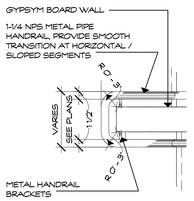
WALL CAP DETAIL — SCALE: 1 1/2" = 1'-0" — D / A6.2

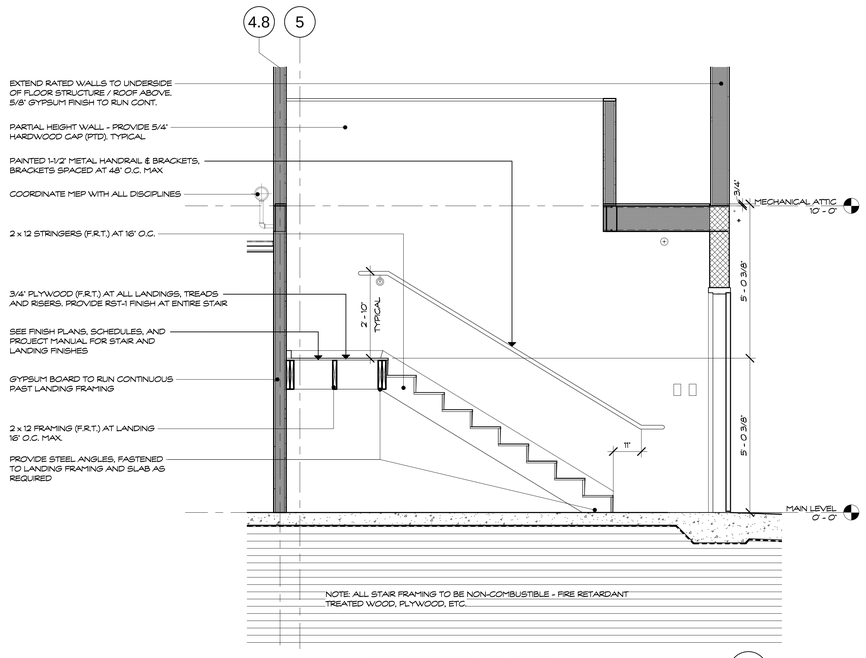


HANDRAIL SECTION — SCALE: 3" = 1'-0" — E / A6.2

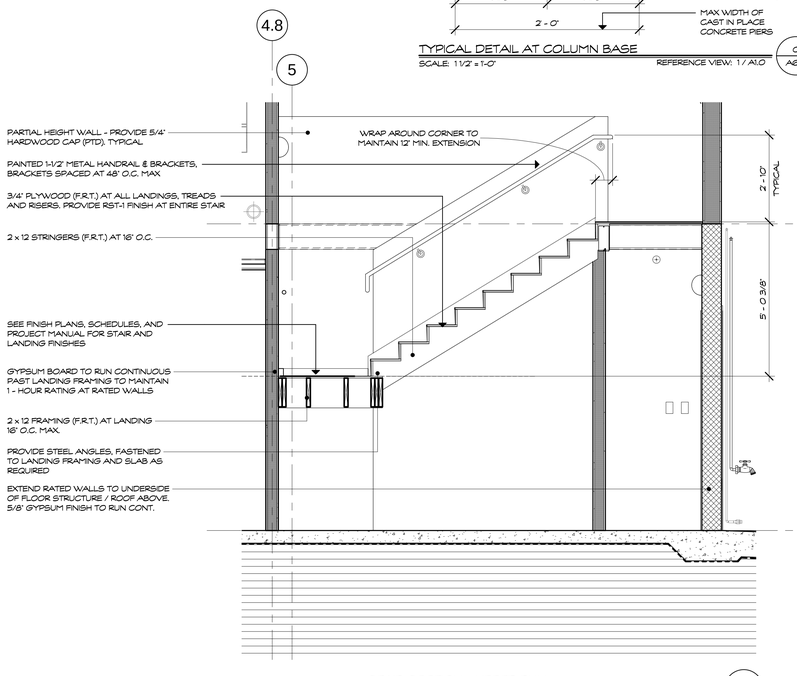


HANDRAIL RETURN PLAN DETAIL — SCALE: 1" = 1'-0" — F / A6.2



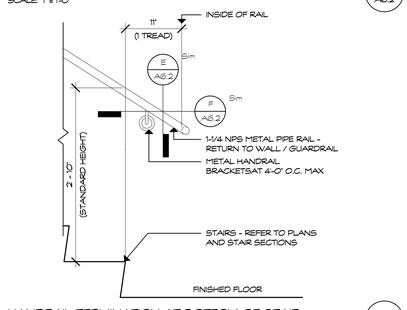


STAIR SECTION - LOWER RUN — SCALE: 1/2" = 1'-0" — REFERENCE VIEW: 1 / A6.2 — 3 / A6.2

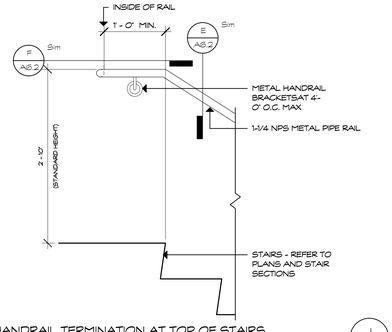


STAIR SECTION - UPPER RUN — SCALE: 1/2" = 1'-0" — REFERENCE VIEW: 1 / A6.2 — 4 / A6.2

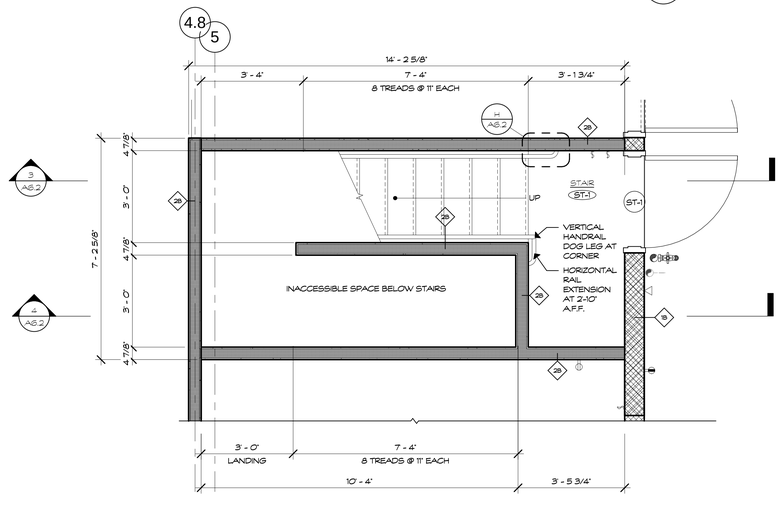
HANDRAIL AT LANDING SWITCHBACK — SCALE: 1" = 1'-0" — G / A6.2



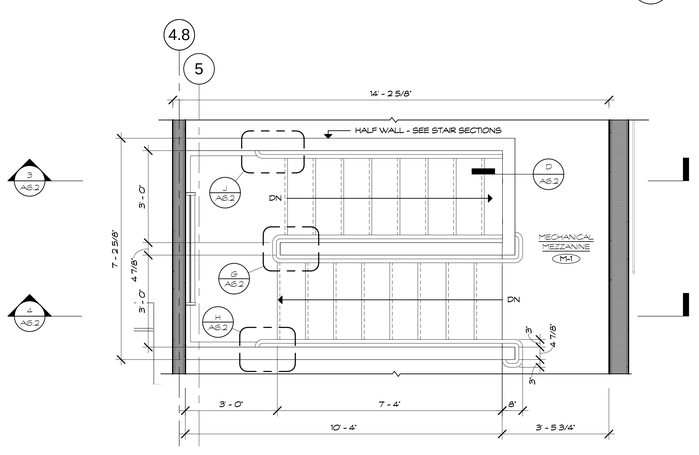
HANDRAIL TERMINATION AT BOTTOM OF STAIR — SCALE: 1" = 1'-0" — H / A6.2



HANDRAIL TERMINATION AT TOP OF STAIRS — SCALE: 1" = 1'-0" — J / A6.2



ENLARGED STAIR PLAN - MAIN LEVEL — NOTE: ALL STAIR FRAMING TO BENON-COMBUSTIBLE - FIRE RETARDANT TREATED WOOD, PLYWOOD, ETC. — SCALE: 1/2" = 1'-0" — 1 / A6.2



ENLARGED STAIR PLAN - UPPER LEVEL — NOTE: ALL STAIR FRAMING TO BE NON-COMBUSTIBLE - FIRE RETARDANT TREATED WOOD, PLYWOOD, ETC. — 2 / A6.2

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Drawing Title: STAIR & SECTION DETAILS

100% CD Submission

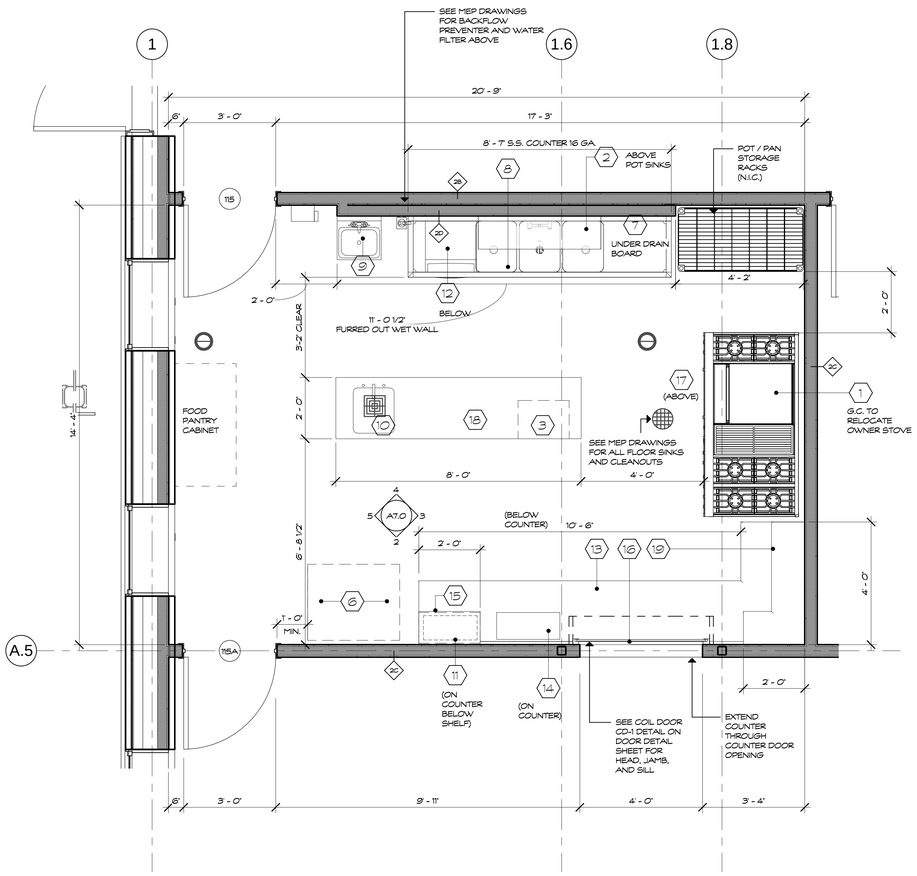
Date: 12/1/16
Scale: As Indicated
Drawn By: BJV
Project Number: 13.220

Drawing Number: A6.2

FOODSERVICE EQUIPMENT SCHEDULE

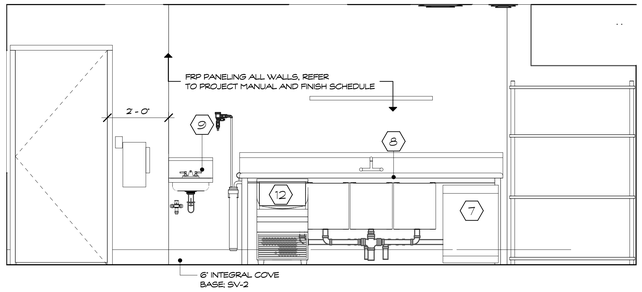
TAG	QTY	DESCRIPTION	MANUFACTURER	MODEL	ELECTRICAL						WATER		WASTE		GAS		REMARKS
					AMPS	K.W.	H.P.	VOLTS	PHASE	DIRECT PLUG	COLD	HOT	DIRECT	INDIRECT	SIZE	BTU.H	
1	1	GAS RANGE - (CONTRACTOR TO RELOCATE EXIST)	EXISTING	EXISTING													CONTRACTOR TO PROVIDE POWER AS INDICATED ON ELECTRICAL DRAWINGS
2	1	STAINLESS STEEL SHELF	ADVANCE TABCO	WS-15-60-16													
3	1	DRAWER	ADVANCE TABCO	SS-2015													
4		NOT USED															
5		NOT USED															
6	1	REFRIGERATOR - CONTRACTOR TO RELOCATE EXISTING	EXISTING	EXISTING													PROVIDE HOOKUP FOR WATER - SEE PLUMBING DRAWINGS
7	1	UNDERCOUNTER DISHWASHER W/ HEAT BOOST	HOBART	LXIH													3/4" HOSES FURN. - CONNECT TO HARD PIPED SERVICES - PROV. WHA & PRV
8	1	STAINLESS STEEL 3-POT SINK	ADVANCE TABCO	93-3-54-24RL													
9	1	ADA WALL MOUNT HAND SINK	ADVANCE TABCO	7-PS-20													WITH 3-1/2" AC/DC HANDS-FREE FAUCET, MIXING VALVE, S.S. SKIRT
10	1	STAINLESS STEEL ADA PREP SINK	ADVANCE TABCO	TA-11A													CUSTOM, INTEGRAL ADA PREP SINK - REFER TO PLUMBING DRAWINGS
11	1	MICROWAVE OVEN	SHARP	R-21LTF													
12	1	UNDERCOUNTER ICE MAKER	SCOTSMAN	CU0415MA-1 15"													AIR COOLED; PROVIDE FILTER, PROVIDE ADA KIT - KUM115
13	1	25" W STAINLESS STEEL COUNTER w/ 5" BACKSPLASH	ADVANCE TABCO	CUSTOM													REFER TO PLAN / INTERIOR ELEVATIONS - PROVIDE S.S. SUPPORT BRACKETS AS REQ'D
14	1	COFFEE MAKER (BY OWNER - N.I.C.)	N.I.C.	N.I.C.													
15	1	STAINLESS STEEL SHELF	ADVANCE TABCO	WS-15-24													REFER TO INTERIOR ELEVATIONS AND CASEWORK DETAILS
16	1	STAINLESS STEEL PUSH UP COUNTER DOOR	COOKSON	THERMSER ES020													HIGH NOISE REDUCTION
17	1	HOOD	REFER TO MECH.	REFER TO MECH.													
18	1	STAINLESS STEEL ADA WORK SURFACE	ADVANCE TABCO	MS248 W/ UNDERSHELF													PROV. S.S. LEG SUPPORTS AS REQ'D w/ OPEN ADA LEG SPACE - COUNTER 2 - 10" A.F.F.
19	1	STAINLESS STEEL SHELF - CORNER	ADVANCE TABCO	CUSTOM													REFER TO PLAN / INTERIOR ELEVATIONS - PROVIDE S.S. SUPPORT BRACKETS AS REQ'D
20		NOT USED															

NOTE: REFER TO PLUMBING, MECHANICAL & ELECTRICAL DRAWINGS FOR ALL ADDITIONAL REQUIREMENTS

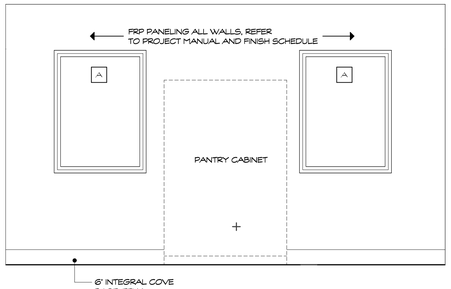


NORTH

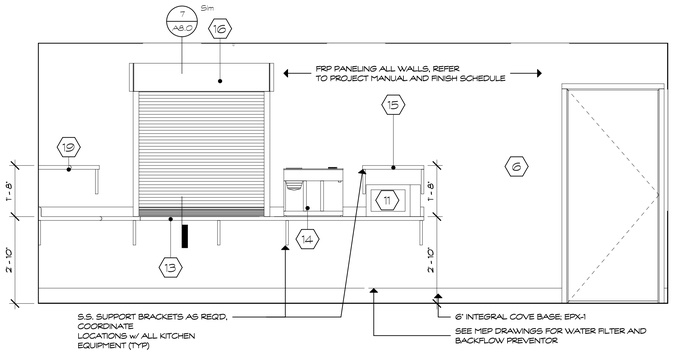
ENLARGED KITCHEN PLAN
SCALE: 1/2" = 1'-0" — REFERENCE VIEW: 1 / A7.0 — 1 / A7.0



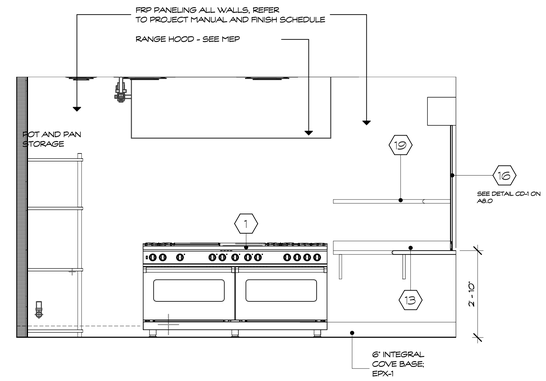
KITCHEN ELEVATION - EAST WALL
SCALE: 1/2" = 1'-0" — REFERENCE VIEW: 1 / A7.0 — 4 / A7.0



KITCHEN ELEVATION - NORTH WALL
SCALE: 1/2" = 1'-0" — REFERENCE VIEW: 1 / A7.0 — 5 / A7.0



KITCHEN ELEVATION - WEST WALL
SCALE: 1/2" = 1'-0" — REFERENCE VIEW: 1 / A7.0 — 2 / A7.0



KITCHEN ELEVATION - SOUTH WALL
SCALE: 1/2" = 1'-0" — REFERENCE VIEW: 1 / A7.0 — 3 / A7.0

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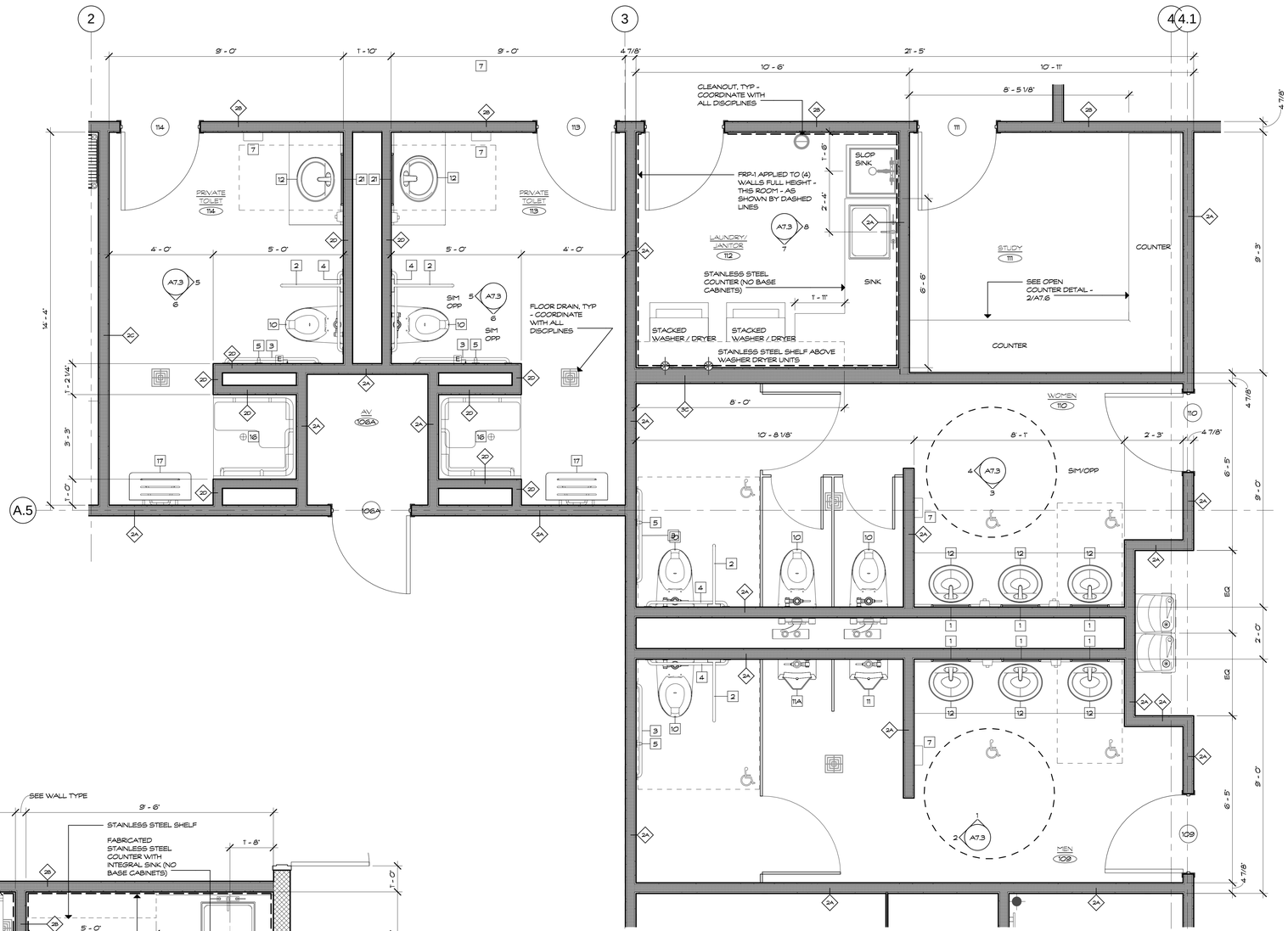
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REV 2	Issued for Bidding	2/10/17	BJV

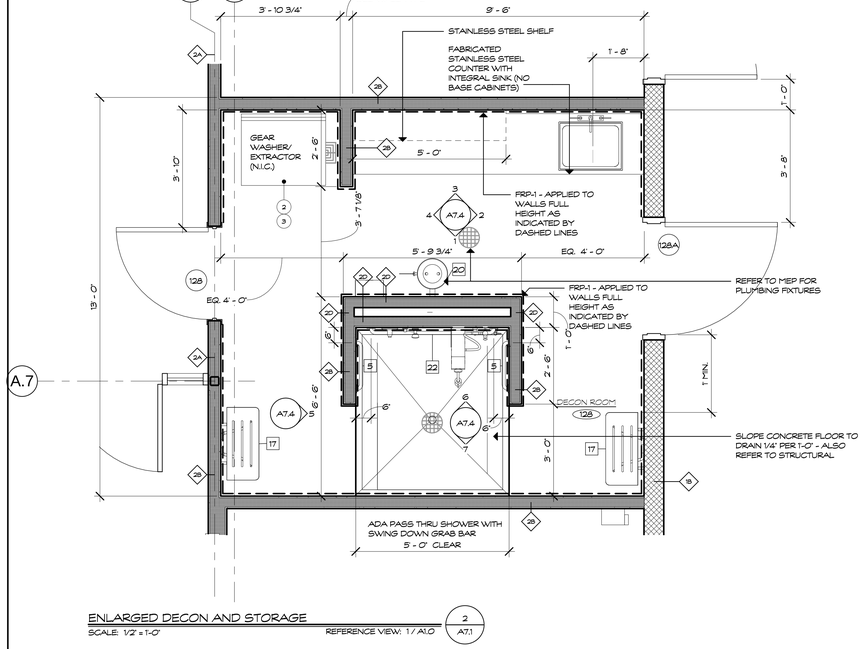
Drawing Title:
ENLARGED KITCHEN PLAN & ELEVATIONS

100% CD Submission

Date: 12/1/16
Scale: 1/2" = 1'-0"
Drawn By: BJV
Project Number: 13.220

Drawing Number: A7.0





ENLARGED DECON AND STORAGE
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A1.0 — 2 / A7.1

ENLARGED TOILET PLAN - MALE 120 / FEMALE 121
SCALE: 1/2" = 1'-0" — NORTH — 1 / A7.1

SYMBOL LEGEND

- NEW METAL STUD PARTITIONS
- NEW CMU WALL
- DOOR NUMBER
- WINDOW TYPE
- ROOM NAME / ROOM NUMBER
- PARTITION TYPE
- CONSTRUCTION NOTE
- ELEVATION/SECTION NUMBER / SHEET NUMBER
- WALL SECTION / DETAIL NUMBER / SHEET NUMBER
- ELEVATION NUMBER / SHEET NUMBER
- F.E.C. - FIRE EXTINGUISHER CABINET (RECESSED ALL LOCATIONS)
- H.D.F. - HANDICAPPED DRINKING FOUNTAIN
- FD - FLOOR DRAIN - SLOPE TILE TO DRAIN

GENERAL NOTES

1. READ ALL GENERAL NOTES ON DRAWING A0.1.
2. CONTRACTORS SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS.
3. ALL DIMENSIONS ARE TO FACE OF CONCRETE MASONRY UNITS AND METAL FRAMING UNLESS OTHERWISE NOTED.
4. ALL NEW WALL AND PARTITION ASSEMBLIES SHALL EXTEND TO UNDERSIDE OF DECK UNLESS OTHERWISE NOTED.
5. PROVIDE CMU WITH PRE-MANUFACTURED (OR FIELD ROUTED) BULLNOSE AT ALL EXPOSED CORNERS.

CONSTRUCTION NOTES

No.	NOTE
1	HOSEGEAR DRYER (N.I.C.) - CONTRACTOR TO PROVIDE 12" LOUVERED WALL CAP, REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION
2	CONTRACTOR TO PROVIDE 8" STEEL BASE AS INDICATED IN DETAIL A/A1.0. COORDINATE SIZE w/ MODEL No. AND OWNER (CONTINENTAL - EM128)
3	EQUIPMENT IS EXISTING (SCBA COMPRESSOR, GEAR WASHER, STATION SIREN & STATION AIR COMPRESSOR) EQUIPMENT IS TO BE DISCONNECTED, RELOCATED AND INSTALLED BY CONTRACTOR. CURRENT EQUIPMENT RESIDES AT EXISTING FIRE STATION. CONTRACTOR TO COORDINATE MOVING, SCHEDULE AND FINAL LOCATION OF EQUIPMENT w/ NSVFC.
4	FLAMMABLE LIQUID STORAGE CABINET (PROVIDED BY OWNER - N.I.C.) CONTRACTOR TO INSTALL, VENT, AND PROPERLY GROUND.
5	METAL WALL MOUNTED SLOPED DESK WITH DRAWER - (BASIS OF DESIGN - GLOBAL INDUSTRIAL ITEM # WG634177BL)

TOILET ACCESSORY LEGEND

1	-	18" x 36" MIRROR - MOUNTED 3' - 4" A.F.F. TO BOTTOM OF REFLECTIVE SURFACE (CENTER ABOVE LAV.)
2	-	30" SWING AWAY GRAB BAR
3	-	42" SIDE GRAB BAR
4	-	36" REAR GRAB BAR
5	-	18" VERTICAL GRAB BAR
6	-	SURFACE MOUNTED SOAP DISPENSER
7	-	ELECTRIC HAND DRYER (RECESS MOUNT KIT)
8	-	RECESSED TOILET PAPER DISPENSER
9	-	H.C. ACCESSIBLE W.C. - WALL HUNG - SEE PLUMBING (MOUNTED 17" A.F.F. TO TOP OF SEAT IN DOWN POSITION)
10	-	STANDARD W.C. - WALL HUNG - SEE PLUMBING (MOUNTED 15" A.F.F. TO TOP OF SEAT IN DOWN POSITION)
11	-	H.C. ACCESSIBLE WALL HUNG URINAL - SEE PLUMBING (MOUNTED 17" A.F.F. TO TOP OF RIM)
11A	-	STANDARD WALL HUNG URINAL - SEE PLUMBING (MOUNTED 24" A.F.F. TO TOP OF RIM)
12	-	H.C. ACCESSIBLE DROP IN SINK - SEE PLUMBING
13	-	PARTITION MOUNTED TOILET PAPER DISPENSER
14	-	PARTITION MOUNTED SANITARY NAPKIN DISPOSAL
15	-	RECESSED SANITARY NAPKIN DISPOSAL
16	-	ADA SHOWER STALL - SEE PLUMBING (PROVIDE ALL REQUIRED ADA GRAB BARS, SHOWER SEAT, CONTROLS AND SPRAYER, INSTALLED AND IN LOCATIONS NECESSARY TO MEET ANSI 117.1 & ADA 2010 STANDARDS AND REQUIRMENTS)
17	-	WALL MOUNTED ADA BENCH
18	-	SHOWER ROD & CURTAIN - PROV. AT ALL SHOWERS
19	-	SANITARY NAPKIN DISPENSER
20	-	WALL MOUNTED EYEWASH - SEE PLUMBING
21	-	24" x 36" MIRROR - MOUNTED 3' - 4" A.F.F. TO BOTTOM OF REFLECTIVE SURFACE (CENTER ABOVE LAV.)
22	-	48" GRAB BAR

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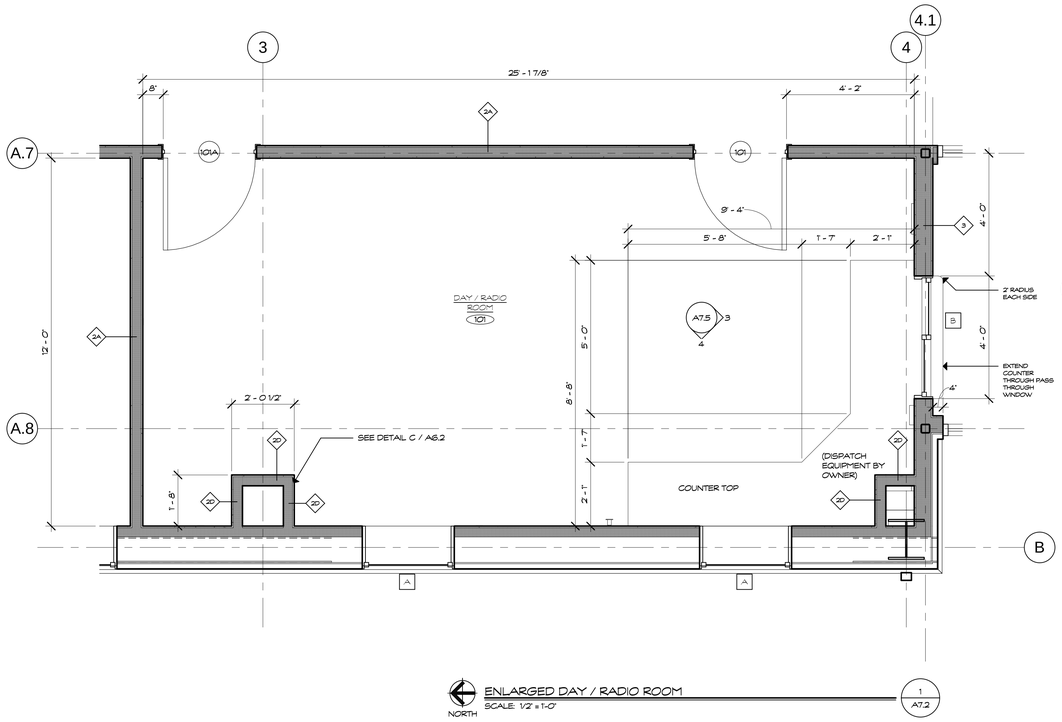
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Drawing Title:
ENLARGED PLANS

100% CD Submission

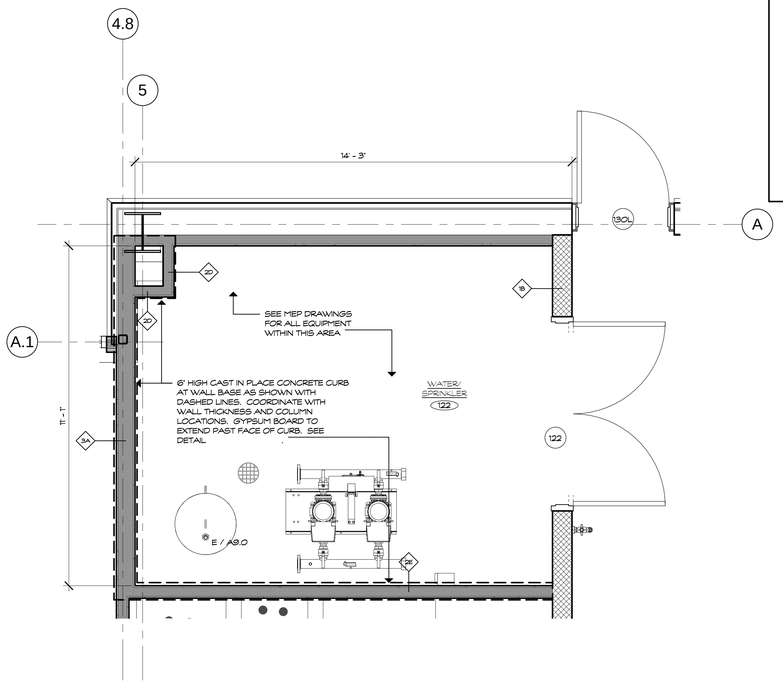
Date: 12/1/16
Scale: As indicated
Drawn By: BJV
Project Number: 13.220
Drawing Number: A7.1



NORTH

ENLARGED DAY / RADIO ROOM (1 / A7.2)

SCALE: 1/2" = 1'-0"



NORTH

ENLARGED WATER / SPRINKLER (2 / A7.2)

SCALE: 1/2" = 1'-0"

SYMBOL LEGEND

- NEW METAL STUD PARTITIONS
- NEW CMU WALL
- DOOR NUMBER
- WINDOW TYPE
- ROOM NAME / ROOM NUMBER
- PARTITION TYPE
- CONSTRUCTION NOTE
- ELEVATION/SECTION NUMBER / SHEET NUMBER
- WALL SECTION / DETAIL NUMBER / SHEET NUMBER
- ELEVATION NUMBER / SHEET NUMBER
- F.E.C. - FIRE EXTINGUISHER CABINET (RECESSED ALL LOCATIONS)
- H.D.F. - HANDICAPPED DRINKING FOUNTAIN
- FD - FLOOR DRAIN - SLOPE TILE TO DRAIN

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Drawing Title: ENLARGED PLANS

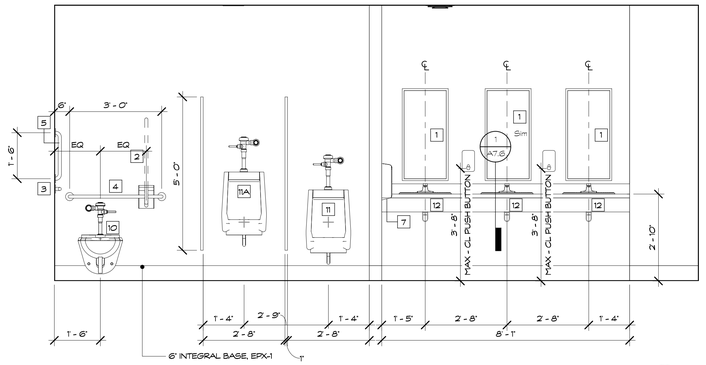
100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: BJV
Project Number: 13.220

Drawing Number: A7.2

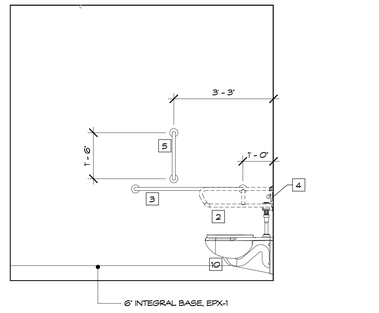
TOILET ACCESSORY LEGEND

1	-	18" x 36" MIRROR - MOUNTED 3' - 4" A.F.F. TO BOTTOM OF REFLECTIVE SURFACE (CENTER ABOVE LAV.)
2	-	30" SWING AWAY GRAB BAR
3	-	42" SIDE GRAB BAR
4	-	36" REAR GRAB BAR
5	-	18" VERTICAL GRAB BAR
6	-	SURFACE MOUNTED SOAP DISPENSER
7	-	ELECTRIC HAND DRYER (RECESS MOUNT KIT)
8	-	RECESSED TOILET PAPER DISPENSER
9	-	H.C. ACCESSIBLE W.C. - WALL HUNG - SEE PLUMBING (MOUNTED 17" A.F.F. TO TOP OF SEAT IN DOWN POSITION)
10	-	STANDARD W.C. - WALL HUNG - SEE PLUMBING (MOUNTED 15" A.F.F. TO TOP OF SEAT IN DOWN POSITION)
11	-	H.C. ACCESSIBLE WALL HUNG URINAL - SEE PLUMBING (MOUNTED 17" A.F.F. TO TOP OF RIM)
11A	-	STANDARD WALL HUNG URINAL - SEE PLUMBING (MOUNTED 24" A.F.F. TO TOP OF RIM)
12	-	H.C. ACCESSIBLE DROP IN SINK - SEE PLUMBING
13	-	PARTITION MOUNTED TOILET PAPER DISPENSER
14	-	PARTITION MOUNTED SANITARY NAPKIN DISPOSAL
15	-	RECESSED SANITARY NAPKIN DISPOSAL
16	-	ADA SHOWER STALL - SEE PLUMBING (PROVIDE ALL REQUIRED ADA GRAB BARS, SHOWER SEAT, CONTROLS AND SPRAYER, INSTALLED AND IN LOCATIONS NECESSARY TO MEET ANSI 117.1 & ADA 2010 STANDARDS AND REQUIRMENTS)
17	-	WALL MOUNTED ADA BENCH
18	-	SHOWER ROD & CURTAIN - PROV. AT ALL SHOWERS
19	-	SANITARY NAPKIN DISPENSER
20	-	WALL MOUNTED EYEWASH - SEE PLUMBING
21	-	24" x 36" MIRROR - MOUNTED 3' - 4" A.F.F. TO BOTTOM OF REFLECTIVE SURFACE (CENTER ABOVE LAV.)
22	-	48" GRAB BAR



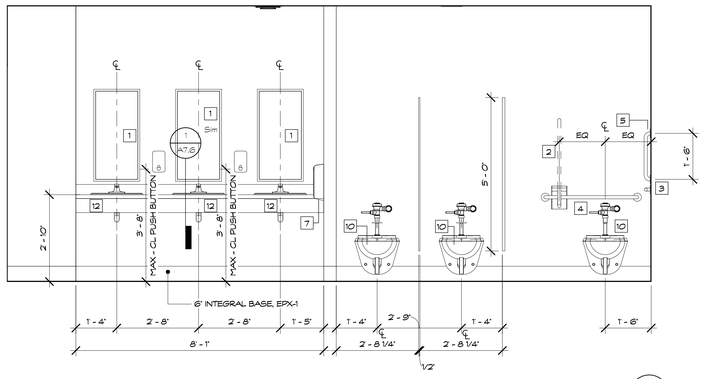
MEN 109 - EAST ELEVATION

SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A7.1 — 1 / A7.3



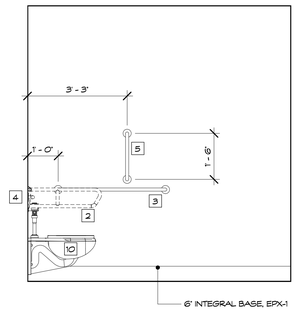
MEN 109 - NORTH ELEVATION

SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A7.1 — 2 / A7.3



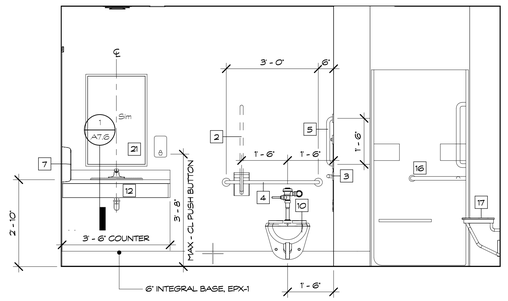
WOMEN 110 - WEST ELEVATION

SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A7.1 — 3 / A7.3



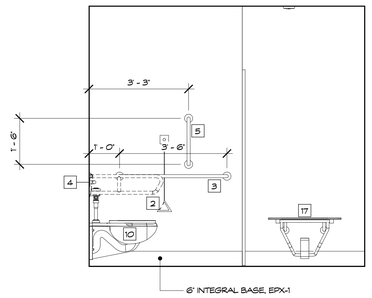
WOMEN 110 - NORTH ELEVATION

SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A7.1 — 4 / A7.3



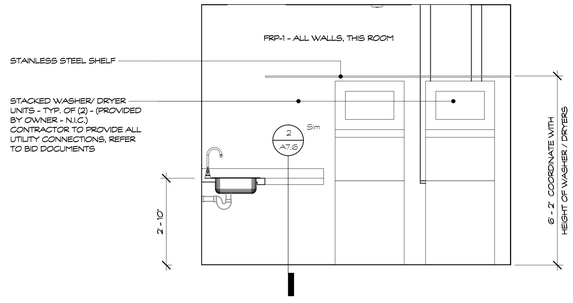
PRIVATE TOILET 114 - SOUTH ELEVATION

SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A7.1 — 5 / A7.3



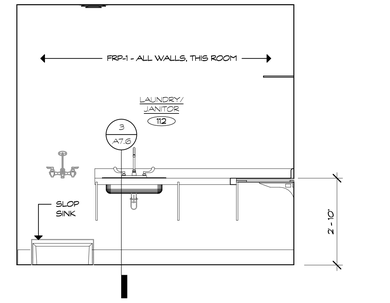
PRIVATE TOILET 114 - WEST ELEVATION

SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A7.1 — 6 / A7.3



LAUNDRY / JANITOR - WEST WALL

SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A7.1 — 7 / A7.3



LAUNDRY / JANITOR - SOUTH WALL

SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A7.1 — 8 / A7.3

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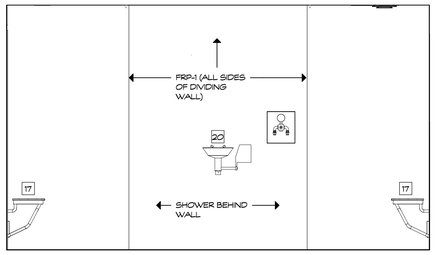
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
INTERIOR ELEVATIONS

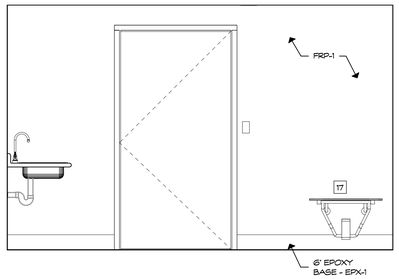
100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: BJV
Project Number: 13.220

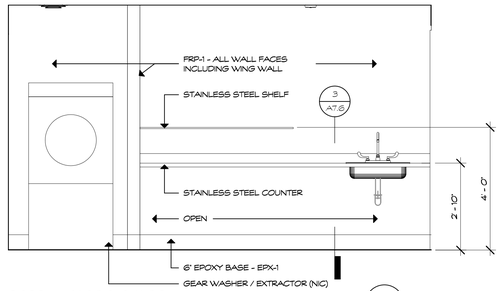
Drawing Number: A7.3



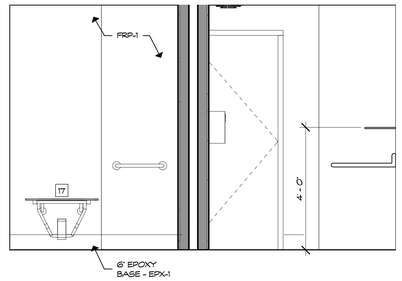
DECON - WEST ELEVATION (1 / A7.4)
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 2 / A7.1



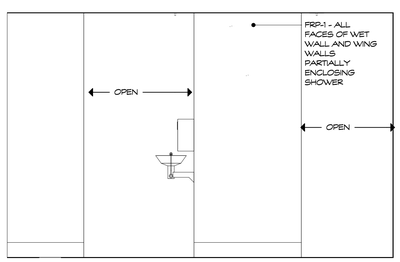
DECON - SOUTH ELEVATION (2 / A7.4)
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 2 / A7.1



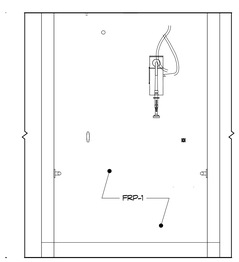
DECON - EAST ELEVATION (3 / A7.4)
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 2 / A7.1



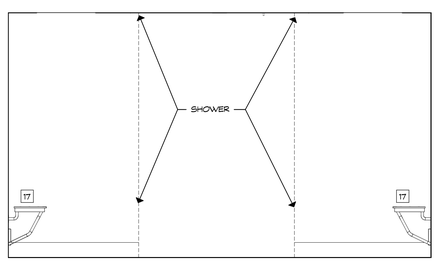
DECON - NORTH ELEVATION (4 / A7.4)
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 2 / A7.1



DECON SHOWER - SOUTH ELEVATION (5 / A7.4)
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 2 / A7.1



DECON SHOWER - EAST ELEVATION (6 / A7.4)
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 2 / A7.1



DECON SHOWER - WEST ELEVATION (7 / A7.4)
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 2 / A7.1

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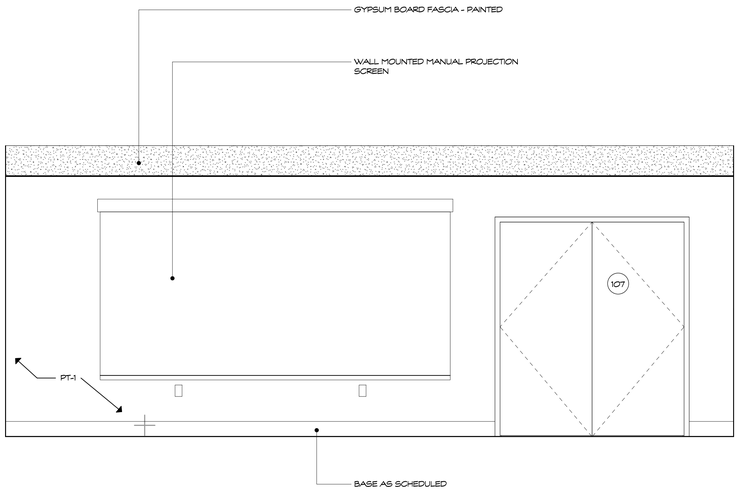
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REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
INTERIOR ELEVATIONS

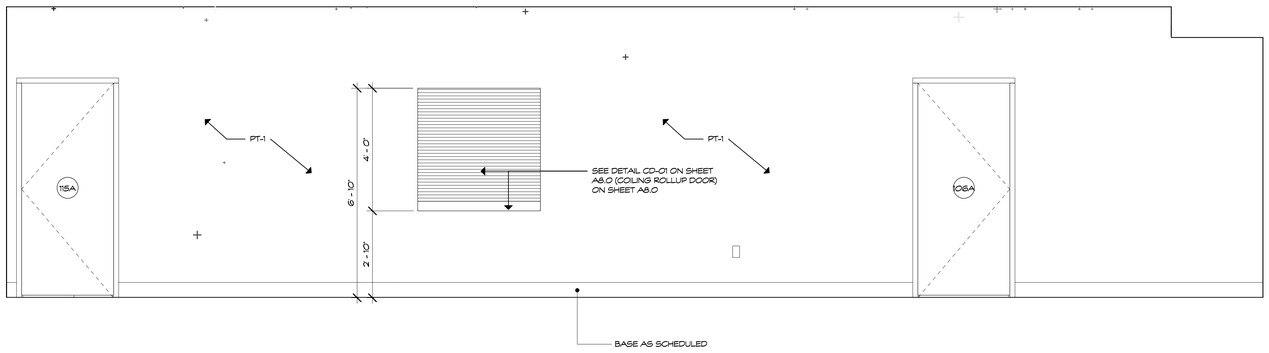
100% CD Submission

Date: 12/1/16
Scale: 1/2" = 1'-0"
Drawn By: BJV
Project Number: 13.220

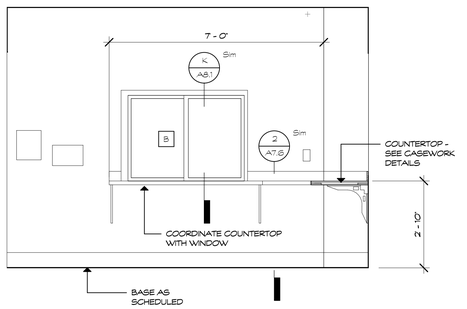
Drawing Number:
A7.4



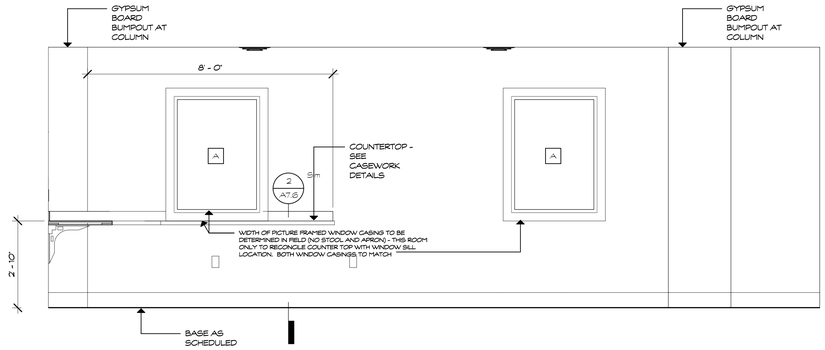
MEETING ROOM - SOUTH WALL
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A1.0 — 1 / A7.5



MEETING ROOM - EAST WALL
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A1.0 — 2 / A7.5



DAY / RADIO ROOM - SOUTH WALL
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A1.0 — 3 / A7.5



DAY / RADIO ROOM - WEST WALL
SCALE: 1/2" = 1'-0" REFERENCE VIEW: 1 / A1.0 — 4 / A7.5

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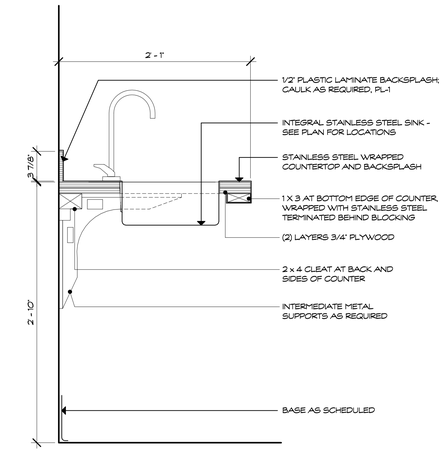
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
INTERIOR ELEVATIONS

100% CD Submission

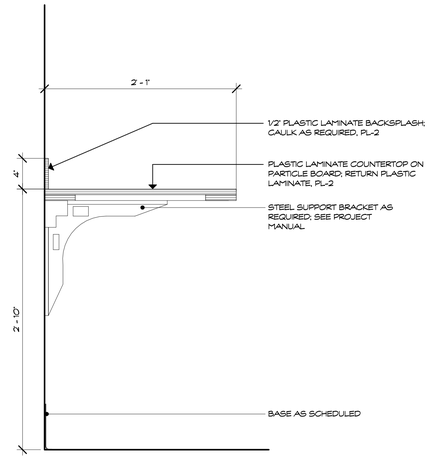
Date: 12/1/16
Scale: 1/2" = 1'-0"
Drawn By: BJV
Project Number: 13.220

Drawing Number:
A7.5



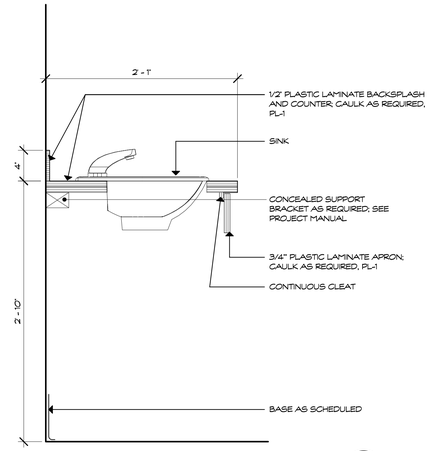
ADA SS COUNTER WITH SINK DETAIL — 3 / A7.6

SCALE: 1 1/2" = 1'-0"



OPEN COUNTER — 2 / A7.6

SCALE: 1 1/2" = 1'-0"



ADA COUNTER WITH SINK DETAIL — 1 / A7.6

SCALE: 1 1/2" = 1'-0"

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
CASEWORK DETAILS

100% CD Submission

Date: 12/1/16
Scale: 1 1/2" = 1'-0"
Drawn By: BJV
Project Number: 13.220

Drawing Number:
A7.6

DOOR SCHEDULE

DOOR NUMBER	FROM ROOM No.	TO ROOM No.	DOUBLE LEAF DOOR	WIDTH	HEIGHT	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	DOOR GLAZING	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	HEAD DETAIL	JAMB DETAIL	SADDLE DETAIL	GLAZING - FRAME	FIRE RATING: RESISTS PASSAGE OF SMOKE	FIRE RATING: 90 MINUTE LABELED	FIRE RATING: 60 MINUTE LABELED	FIRE RATING: 45 MINUTE LABELED	FIRE RATING: NOT REQUIRED	HARDWARE - FIRE CODE: PANIC RELEASE LATCH	HARDWARE - FIRE CODE: POSITIVE LATCHING	HARDWARE - FIRE CODE: AUTOMATIC CLOSER	HARDWARE - FIRE CODE: ELECTRO-MAGNETIC HOLD	HARDWARE - FIRE CODE: DELAYED ACTION CLOSER	HARDWARE - FIRE CODE: PUSH PLATE/PULL HANDLES	HARDWARE - FIRE CODE: ALARMED EXIT - SEE ELEC.	HARDWARE - DISABLED REQUIREMENTS: POWER ASSIST. OPERATOR	HARDWARE - DISABLED REQUIREMENTS: LEVER HANDLES	HARDWARE - DISABLED REQUIREMENTS: KICK PLATE	HARDWARE - DISABLED REQUIREMENTS: TACTILE WARNING	HARDWARE - DISABLED REQUIREMENTS: ACCESSIBLE THRESHOLD	HARDWARE - DISABLED REQUIREMENTS: SIGNAGE TYPE - SEE A930	SIGNAGE TEXT	REMARKS
100		100	•	6' - 0"	7' - 0"	3	ALUM	ALUM	GL-3	C	ALUM	ALUM	SEE FRAME	A		GL-3					•	•	•		•			•				S5	EXIT	2,9
100A	100	126	•	6' - 0"	7' - 0"	3	ALUM	ALUM	GL-3	C	ALUM	ALUM	ELEVATIONS	A		GL-3					•	•	•		•			•				S5	EXIT	2,7,8,9
101	105	101		3' - 0"	7' - 0"	4	WD	STD	GL-1	A	HM	PTD	HM-2	HM-2							•	•	•						•	•	•	S1	RADIO / DAY ROOM	
101A	105	101		3' - 0"	7' - 0"	4	WD	STD	GL-1	A	HM	PTD	HM-2	HM-2							•	•	•						•	•	•	S1	RADIO / DAY ROOM	
102	105	102		3' - 0"	7' - 0"	4	WD	STD	GL-1	A	HM	PTD	HM-2	HM-2							•	•	•						•	•	•	S1	OFFICE	
103	105	103		3' - 0"	7' - 0"	4	WD	STD	GL-1	A	HM	PTD	HM-2	HM-2							•	•	•						•	•	•	S1	OFFICE	
104	105	104		3' - 0"	7' - 0"	4	WD	STD	GL-1	A	HM	PTD	HM-2	HM-2							•	•	•						•	•	•	S1	OFFICE	
105	105			3' - 0"	7' - 0"	4	HM	PTD	GL-3	A	HM	PTD	HM-3	HM-3	A						•	•	•		•			•	•		•	S5	EXIT	2
106	106			3' - 0"	7' - 0"	4	HM	PTD	GL-3	A	HM	PTD	HM-3	HM-3	A						•	•	•		•			•	•		•	S5	EXIT	2
106A	106	106A		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2							•	•							•	•	•	S1	AV STORAGE	
106B	105	106	•	6' - 0"	7' - 0"	2	WD	STD	GL-1	A	HM	PTD	HM-2	HM-2							•	•	•		•			•	•	•	•	S1	MEETING ROOM	9
106C	105	106		3' - 0"	7' - 0"	4	WD	STD	GL-1	A	HM	PTD	HM-2	HM-2							•	•	•		•			•	•	•	•	S1	MEETING ROOM	
107	106	107	•	6' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			SEE REMARKS				•	•	•		•			•	•	•	•	S1	STORAGE	6
107A	105	105		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			SEE REMARKS				•	•	•		•			•	•	•	•	S1	STORAGE	6
108	108	126	•	6' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2							•	•	•		•			•	•	•	•	S1	IT CLOSET	
109	126	109		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2												•	•						S3	MEN	
110	126	110		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2												•	•						S2	WOMEN	
111	116	111		3' - 0"	7' - 0"	2	WD	STD	GL-1	A	HM	PTD	HM-2	HM-2			•		•			•	•		•			•	•	•	•	S1	LAUNDRY / CUSTODIAN	
112	116	112		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			•		•			•	•		•			•	•	•	•	S1	STUDY	
113	116	113		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			•		•			•	•		•			•	•	•	•	S4	UNISEX	
114	116	114		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			•		•			•	•		•			•	•	•	•	S4	UNISEX	
115	116	115		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			•		•			•	•		•			•	•	•	•	S1	KITCHEN	
115A	106	115		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2							•	•	•		•			•	•	•	•	S1	KITCHEN	
115B	106	115		4' - 0"	4' - 0"	CD-1	SS	SS	--	ROLL-UP COIL DOOR			CD-1	CD-1							•													
116	116			3' - 0"	7' - 0"	4	HM	PTD	GL-3	A	HM	PTD	HM-3	HM-3	A						•	•	•		•			•	•		•	S5	EXIT	2
116A	116	121		3' - 0"	7' - 0"	2	WD	STD	GL-1	A	HM	PTD	HM-2	HM-2			SEE REMARKS					•	•		•			•	•	•	•	S1,S1	HALL / LIVING QUARTERS	3,6,8
117	116	117		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			SEE REMARKS					•	•		•			•	•	•	•	S1	BUNK ROOM A	6
118	116	118		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			SEE REMARKS					•	•		•			•	•	•	•	S1	BUNK ROOM B	6
119	116	119		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			SEE REMARKS					•	•		•			•	•	•	•	S1	BUNK ROOM C	6
120	116	120		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			SEE REMARKS					•	•		•			•	•	•	•	S1	BUNK ROOM D	6
121	121		•	6' - 0"	7' - 0"	3	ALUM	ALUM	GL-3	C	ALUM	ALUM	SEE FRAME EL.	A		GL-3					•	•	•		•			•				S5	EXIT	2,9
121A	126	121	•	6' - 0"	7' - 0"	2	WD	STD	GL-5	A	HM	PTD	HM-2	HM-2			•		•			•	•		•			•	•	•	•	S1	EXIT	2,7,8,9
122	122	130	•	6' - 0"	7' - 2"	1	HM	PTD	--	A	HM	PTD	HM-1	HM-1			•	•				•	•		•			•	•	•	•	S1	WATER / SPRINKLERS	
123	130	123		3' - 0"	7' - 2"	1	HM	PTD	--	A	HM	PTD	HM-1	HM-1			•	•				•	•		•			•	•	•	•	S1	UTILITY	
124	124	130	•	6' - 0"	7' - 2"	1	HM	PTD	--	A	HM	PTD	HM-1	HM-1			•	•				•	•		•			•	•	•	•	S1	STORAGE ROOM	
125	130	125	•	6' - 0"	7' - 2"	2	HM	PTD	GL-5	A	HM	PTD	HM-1	HM-1			•	•				•	•		•			•	•		•	S1/S1	PASSAGE/APPARATUS BAYS	2,3
127	127	130		3' - 0"	7' - 2"	1	HM	PTD	--	A	HM	PTD	HM-1	HM-1			•	•				•	•		•			•	•	•	•	S1	STORAGE	
128	128	128		3' - 0"	7' - 0"	1	WD	STD	--	A	HM	PTD	HM-2	HM-2			SEE REMARKS					•	•		•			•	•	•	•	S1	PERSONNEL DECON	4,6
128A	130	128		3' - 8"	7' - 2"	1	HM	PTD	--	A	HM	PTD	HM-1	HM-1			•	•				•	•		•			•	•	•	•	S1	PERSONNEL DECON	
129	130	129		3' - 0"	7' - 2"	1	HM	PTD	--	A	HM	PTD	HM-1	HM-1			•	•				•	•		•			•	•	•	•	S1	SELF-CONTAINED BREATHING APPARATUS ROOM	8
129A	129			3' - 0"	7' - 0"	1	HM	PTD	--	A	HM	PTD	HM-3	HM-3	A						•	•	•		•			•	•		•	S5	EXIT	2,8
130	130			3' - 0"	7' - 0"	4	HM	PTD	GL-3	A	HM	PTD	HM-4	HM-4	A						•	•	•		•			•	•		•	S5	EXIT	2,8
130A	130			14' - 0"	14' - 0"	OH-1	STL	FF	GL-2	B	STL	PTD	OH-1	OH-2								OVERHEAD DOOR													5
130B	130			14' - 0"	14' - 0"	OH-1	STL	FF	GL-2	B	STL	PTD	OH-1	OH-2								OVERHEAD DOOR													5
130C	130			14' - 0"	14' - 0"	OH-1	STL	FF	GL-2	B	STL	PTD	OH-1	OH-2								OVERHEAD DOOR													5
130D	130			14' - 0"	14' - 0"	OH-1	STL	FF	GL-2	B	STL	PTD	OH-1	OH-2								OVERHEAD DOOR													5
130E	130			3' - 0"	7' - 0"	4	HM	PTD	GL-3	A	HM	PTD	HM-4	HM-4	A						•	•	•		•			•	•		•	S5	EXIT	2,8
130F	130			3' - 0"	7' - 0"	4	HM	PTD	GL-3	A	HM	PTD	HM-4	HM-4	A						•	•	•		•			•	•		•	S5	EXIT	2,8
130G	130			14' - 0"	14' - 0"	OH-1	STL	FF	GL-2	B	STL	PTD	OH-1	OH-1								OVERHEAD DOOR													5
130H	130			14' - 0"	14' - 0"	OH-1	STL	FF	GL-2	B	STL	PTD	OH-1	OH-1								OVERHEAD DOOR													5
130J	130			14' - 0"	14' - 0"	OH-1	STL	FF	GL-2	B	STL	PTD	OH-1	OH-1								OVERHEAD DOOR													5
130K	130			14' - 0"	14' - 0"	OH-1	STL	FF	GL-2	B	STL	PTD	OH-1	OH-1								OVERHEAD DOOR													5
130L	130			3' - 0"	7' - 0"	4	HM	PTD	GL-3	A	HM	PTD	HM-4	HM-4	A						•	•	•		•			•	•		•	S5	EXIT	2,8
200	M-1		•	6' - 0"	7' - 0"	1	HM	PTD	--	A	HM	PTD	HM-1	HM-1	B		•	•				•	•		•			•	•	•	•	S1	NOT AN EXIT	
201	M-1		•	6' - 0"	7' - 0"	1	HM	PTD	--	A	HM	PTD	HM-1	HM-1	B		•	•				•	•		•			•	•	•	•	S1	NOT AN EXIT	
ST-1	ST-1	130		3' - 0"	7' - 2"	1	HM	PTD	--	A	HM	PTD	HM-1	HM-1			•	•				•	•		•			•	•	•	•	S1	MECHANICAL MEZZANINE	

ABBREVIATIONS

AL/ALUM	-	ALUMINUM
FF	-	FACTORY FINISH
F.R.S.G.	-	FIRE RATED SAFETY GLASS
FST	-	FROSTED
HM	-	HOLLOW METAL
INSUL	-	INSULATED
LAM	-	LAMINATED SAFETY GLASS
PTD	-	PAINTED
SS	-	STAINLESS STEEL
STD	-	STAINED
STL	-	STEEL
TEMP	-	TEMPERED
WD	-	WOOD

GENERAL DOOR NOTES

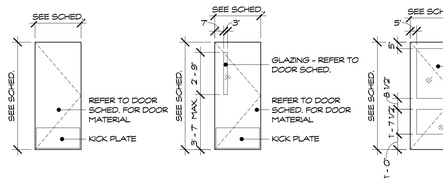
1. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS & DIMENSIONS.
2. ALL NEW KICK PLATES SHALL BE 16" HIGH AND OFFSET 1" FROM VERTICAL EDGES OF DOOR UNLESS OTHERWISE NOTED.
3. ALL GLASS IN DOORS, SIDE LITES AND TRANSOMS SHALL BE TEMPERED, SEE SCHEDULE AND WINDOW ELEVATIONS FOR ADDITIONAL GLAZING REQUIREMENTS.
4. ALL EXTERIOR DOORS SHALL RECEIVE FULL WEATHER STRIPPING ON ALL SIDES, TOP AND BOTTOM.
5. SEE SIGNAGE DETAILS AND PLANS SHEET A9.2 FOR ADDITIONAL SIGNAGE INFORMATION.
6. REFER TO PROJECT MANUAL FOR DOOR HARDWARE SETS.
7. PROVIDE FLOOR TRANSITION STRIPS/REDUCERS BETWEEN ALL DISSIMILAR FLOOR MATERIALS.

SCHEDULE REMARKS

1. NOT USED
2. PROVIDE CONTINUOUS HINGE AT DOORS INDICATED.
3. PROVIDE SIGNAGE AT BOTH SIDES OF DOOR.
4. EXIT DOOR ONLY. OMIT EXTERIOR HARDWARE AND TRIM.
5. OVERHEAD DOOR, REFER TO PROJECT MANUAL FOR HARDWARE AND ELECTRICAL REQUIREMENTS.
6. 20 MINUTE RATED DOOR.
7. PROVIDE REMOTE ACCESS TO DAY / RADIO ROOM
8. SELF-CONTAINED ELECTRONIC LOCKS (PROGRAMMABLE LOCKSET)
9. REMOVABLE CENTER MULLION

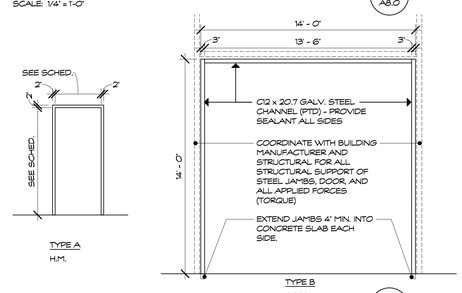
GLAZING SCHEDULE

GL-1	1/4" CLEAR TEMPERED
GL-2	1/2" LOW-E COATED CLEAR, TEMPERED INSULATED
GL-3	1" LOW-E COATED CLEAR, TEMPERED INSULATED
GL-4	1" LOW-E COATED CLEAR, INSULATED
GL-5	CLEAR, FIRE RATED



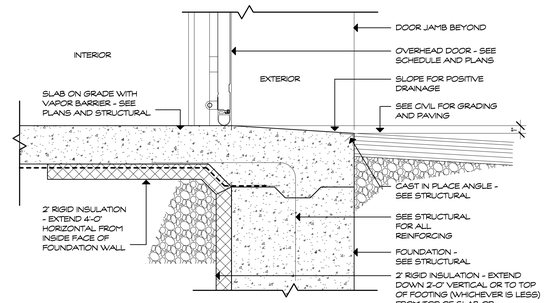
DOOR ELEVATIONS

SCALE: 1/4" = 1'-0" (1 / A8.0)



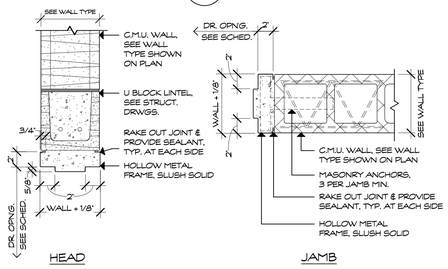
FRAME ELEVATIONS

SCALE: 1/4" = 1'-0" (2 / A8.0)



SILL DETAIL AT OVERHEAD DOOR

SCALE: 1 1/2" = 1'-0" REFERENCE VIEW: (4 / A8.0)

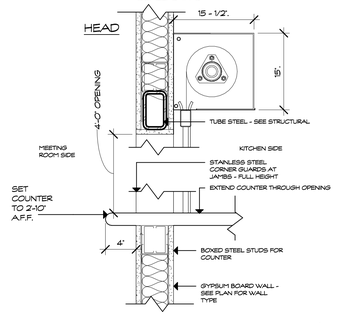


HM - 1

CMU WALL- FOR WALL TYPE AND RATING REQUIREMENTS SEE FLOOR PLANS

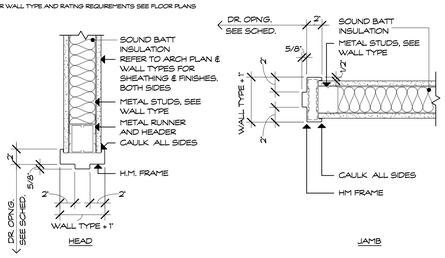
DOOR SADDLE DETAILS

SCALE: 3" = 1'-0" (3 / A8.0)



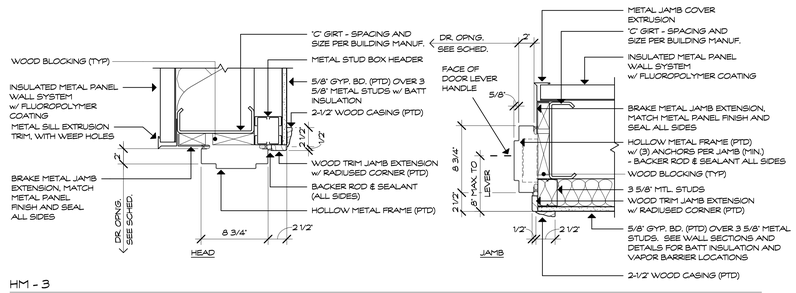
CD - 1 (COILING ROLLUP DOOR)

FOR WALL TYPE AND RATING REQUIREMENTS SEE FLOOR PLANS



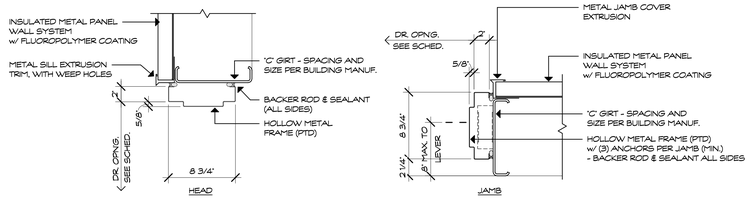
HM - 2

FRAMED WALLS - FOR WALL TYPE AND RATING REQUIREMENTS SEE FLOOR PLANS



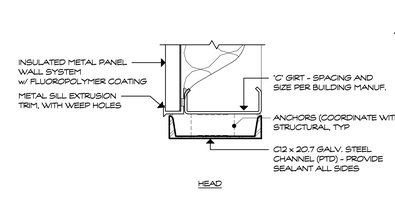
HM - 3

TYPICAL EXTERIOR WALL w/ GYPSUM BOARD INTERIOR FINISH



HM - 4

TYPICAL EXTERIOR WALL w/ EXPOSED STRUCTURE AT INTERIOR



OH - 1

TYPICAL OVERHEAD DOOR

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

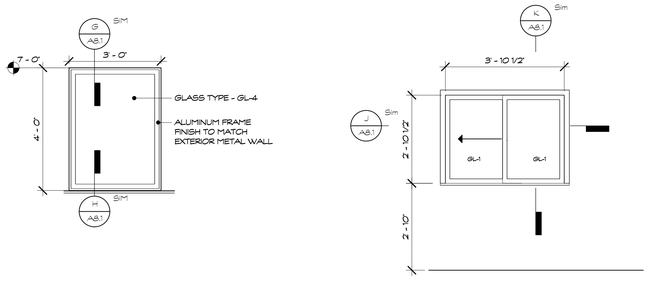
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06518-2340
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title: DOOR SCHEDULE & DETAILS

Date: 12/1/16
Scale: As indicated
Drawn By: BJV
Project Number: 13.220
Drawing Number: A8.0

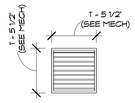
100% CD Submission



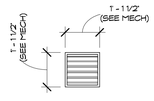
A — EXTERIOR FIXED ALUMINUM WINDOW (BY METAL BUILDING MANUFACTURER)

B — INTERIOR SLIDING PASS THROUGH WINDOW

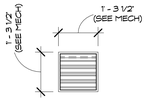
WINDOW TYPES
SCALE: 1 1/2" = 1'-0" — 1 / A8.1



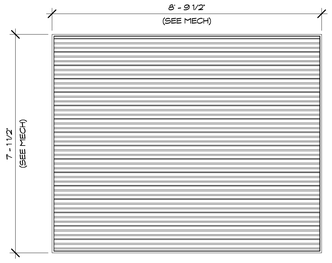
L1 — ALUMINUM EXTRUDED DRAINABLE LOUVER - FINISH TO MATCH EXTERIOR METAL WALL (REFER TO MECHANICAL)



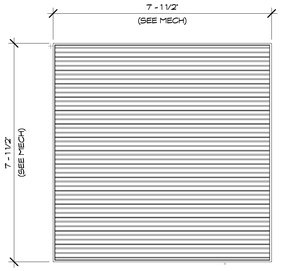
L2 — ALUMINUM EXTRUDED DRAINABLE LOUVER - FINISH TO MATCH EXTERIOR METAL WALL (REFER TO MECHANICAL)



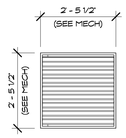
L3 — ALUMINUM EXTRUDED DRAINABLE LOUVER - FINISH TO MATCH EXTERIOR METAL WALL (REFER TO MECHANICAL)



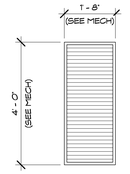
L4 — ALUMINUM EXTRUDED DRAINABLE LOUVER - FINISH TO MATCH EXTERIOR METAL WALL (REFER TO MECHANICAL)



L5 — ALUMINUM EXTRUDED DRAINABLE LOUVER - FINISH TO MATCH EXTERIOR METAL WALL (REFER TO MECHANICAL)

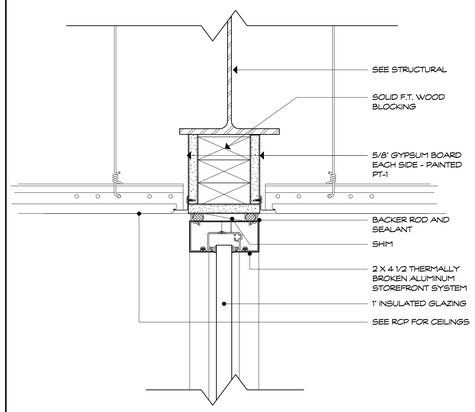


L6 — HEAVY DUTY EXTRUDED ALUMINUM LOUVER

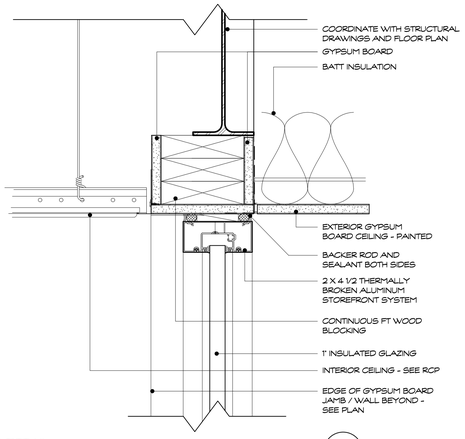


L7 — HEAVY DUTY EXTRUDED ALUMINUM LOUVER

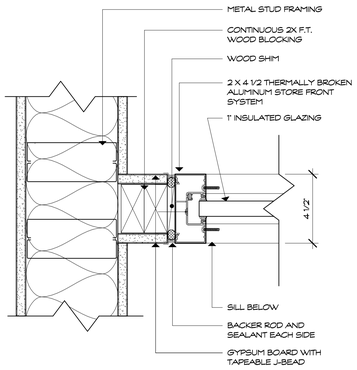
LOUVER TYPES
SCALE: 1/2" = 1'-0" — 2 / A8.1



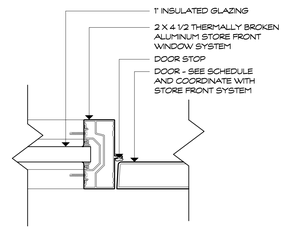
HEAD DETAIL
SCALE: 3" = 1'-0" — A / A8.1



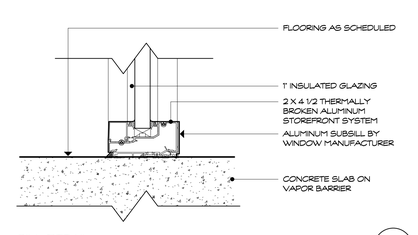
HEAD DETAIL
SCALE: 3" = 1'-0" — B / A8.1



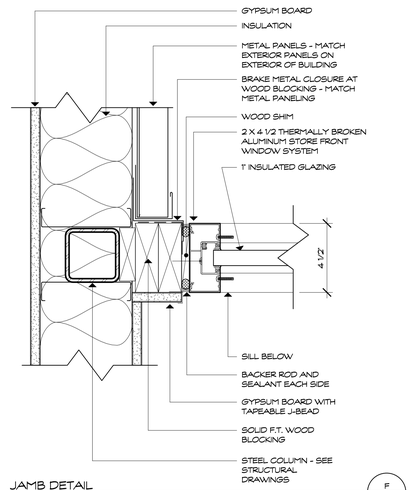
JAMB DETAIL
SCALE: 3" = 1'-0" — REFERENCE VIEW: 9 / A8.0 — C / A8.1



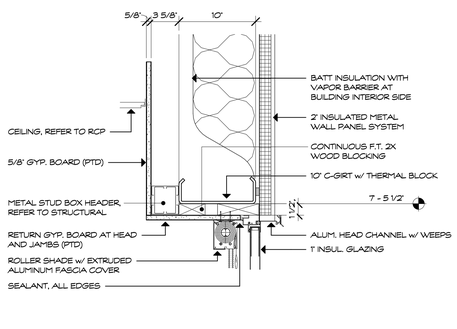
MULLION DETAIL
SCALE: 3" = 1'-0" — REFERENCE VIEW: 9 / A8.0 — D / A8.1



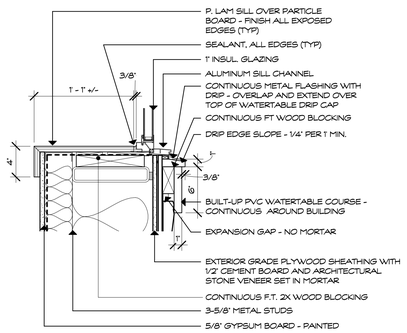
SILL DETAIL
SCALE: 3" = 1'-0" — REFERENCE VIEW: — E / A8.1



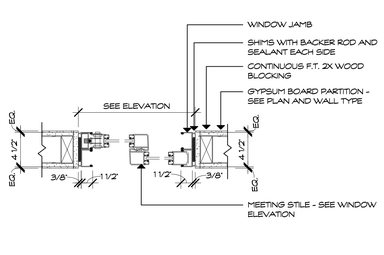
JAMB DETAIL
SCALE: 3" = 1'-0" — REFERENCE VIEW: 9 / A8.0 — F / A8.1



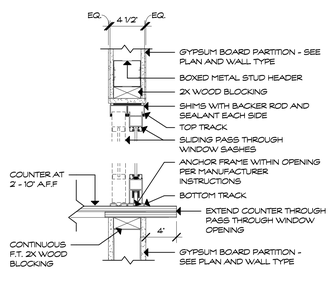
TYPICAL WINDOW HEAD (JAMB SIM.)
SCALE: 1 1/2" = 1'-0" — G / A8.1



TYPICAL WINDOW SILL
SCALE: 1 1/2" = 1'-0" — H / A8.1



PASS THROUGH WINDOW JAMBS
SCALE: 1 1/2" = 1'-0" — REFERENCE VIEW: 10 / A8.1 — J / A8.1



PASS THROUGH WINDOW HEAD/SILL
SCALE: 1 1/2" = 1'-0" — REFERENCE VIEW: 3 / A7.5 — K / A8.1

GENERAL NOTE:

ALL WOOD BLOCKING SHALL BE FIRE TREATED UNLESS OTHERWISE NOTED

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers

3190 Whitney Avenue, Hamden, CT 06518-2340
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

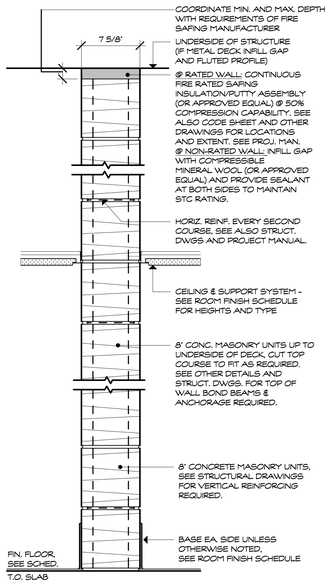
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
WINDOW & LOUVER SCHEDULE & DETAILS

100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: BJV
Project Number: 13.220

Drawing Number: A8.1

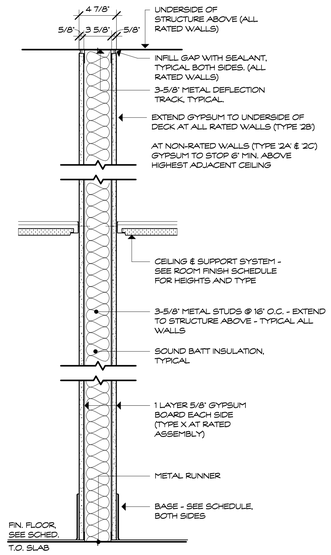


TYPE 1A — SEE GENERAL NOTES ON THIS SHEET

STC RATING: 48 MINIMUM

TYPE 1B — SEE GENERAL NOTES ON THIS SHEET

1HR RATED - UL #U805
STC RATING: 48 MINIMUM



TYPE 2A — SEE GENERAL NOTES ON THIS SHEET

STC RATING: 45 MINIMUM

TYPE 2B — SEE GENERAL NOTES ON THIS SHEET

1HR RATED - UL #U419
STC RATING: 45 MINIMUM

TYPE 2C — SEE GENERAL NOTES ON THIS SHEET

CREASED 3" SAFB INSULATION
STC RATING: 51 MINIMUM

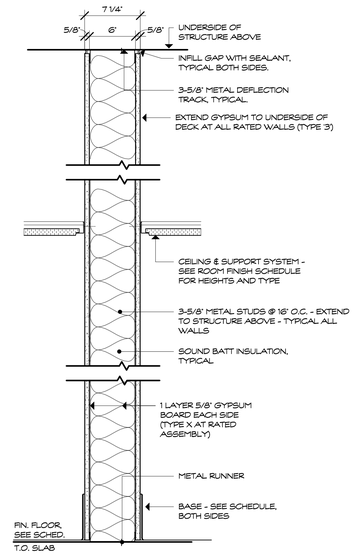
TYPE 2D — SEE GENERAL NOTES ON THIS SHEET

OMIT ONE LAYER OF GWB ON CHASE SIDE

TYPE 2E — SEE GENERAL NOTES ON THIS SHEET

STC RATING: 45 MINIMUM

SEE DETAIL E/A9.0 FOR ALTERNATE CURB DETAIL AT BASE OF WALL.



TYPE 3 — SEE GENERAL NOTES ON THIS SHEET

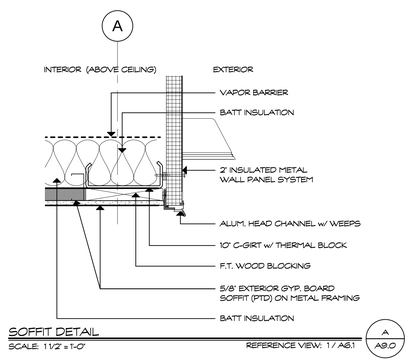
1HR RATED - UL #U419
STC RATING: 45 MINIMUM

TYPE 3A — SEE GENERAL NOTES ON THIS SHEET

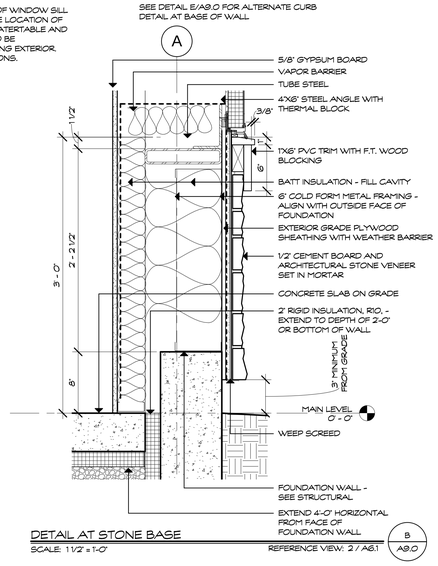
1HR RATED - UL #U419
STC RATING: 45 MINIMUM
SEE DETAIL E/A9.0 FOR ALTERNATE CURB DETAIL AT BASE OF WALL

NOTE

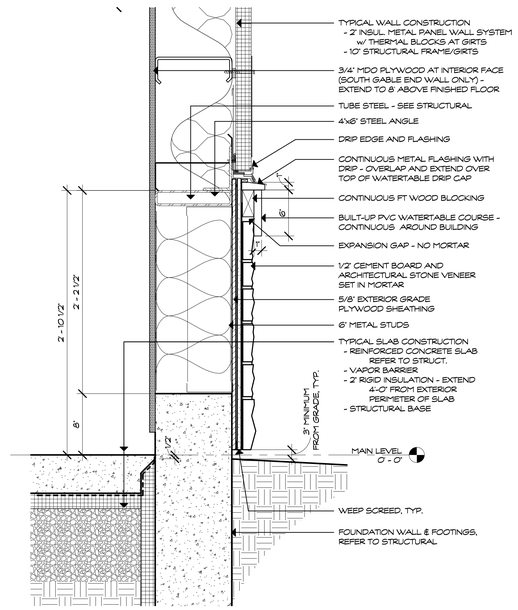
ACTUAL FIELD HEIGHT OF WINDOW SILL FROM SLAB TO DICTATE LOCATION OF WATERTABLE TRIM - WATERTABLE AND STONE BASE DETAIL TO BE CONTINUOUS AT BUILDING EXTERIOR. SEE EXTERIOR ELEVATIONS.



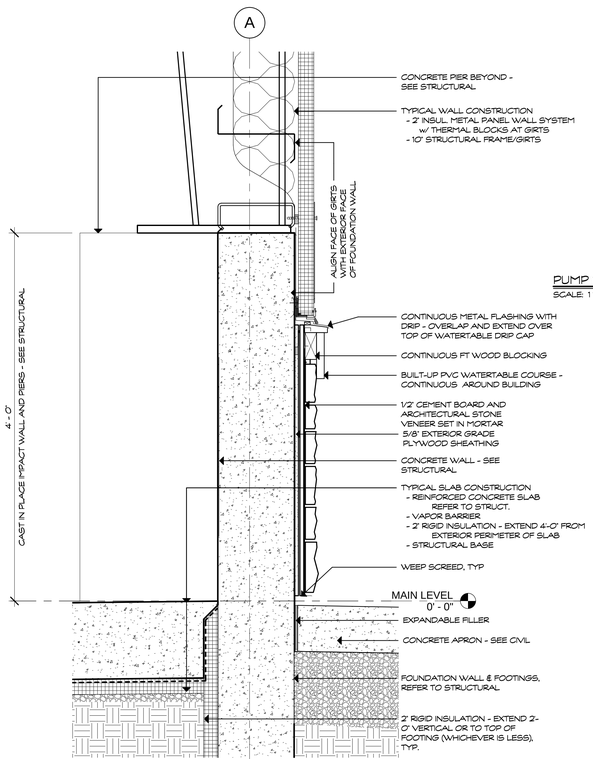
SOFFIT DETAIL — SCALE: 1 1/2" = 1'-0" — REFERENCE VIEW: 1 / A8.1 — A9.0



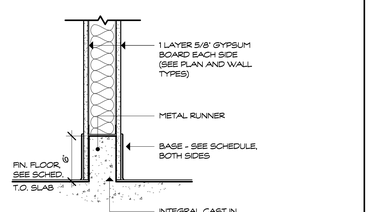
DETAIL AT STONE BASE — SCALE: 1 1/2" = 1'-0" — REFERENCE VIEW: 2 / A8.1 — B A9.0



STONE BASE DETAIL - APPARATUS BAY END WALL — SCALE: 1 1/2" = 1'-0" — REFERENCE VIEW: 3 / A8.0 — C A9.0



STONE BASE / IMPACT WALL DETAIL - APPARATUS BAY END WALL — SCALE: 1 1/2" = 1'-0" — REFERENCE VIEW: 4 / A8.1 — D A9.0



PUMP ROOM CURB DETAIL — SCALE: 1 1/2" = 1'-0" — E A9.0

GENERAL NOTES

1. AT FIRE RATED WALLS SEAL ALL DUCT, PIPE AND MISCELLANEOUS PENETRATIONS THROUGH WALL WITH SAFING INSULATION/PUTTY ASSEMBLY AS REQUIRED TO MEET FIRE RATING, TO RESIST THE PASSAGE OF SMOKE AND TO MAINTAIN MINIMUM STC RATING INDICATED. SEE ALSO CODE PLANS, OTHER DRAWINGS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION.
2. AT FIRE RATED WALL INTERSECTIONS WITH BEAMS, JOISTS OR OTHER STRUCTURAL ELEMENTS PROVIDE GAP AT PERIMETER TO ALLOW INSTALLATION OF INSULATION/PUTTY ASSEMBLY AS REQUIRED TO MEET FIRE RATING, TO RESIST THE PASSAGE OF SMOKE AND TO MAINTAIN STC RATING INDICATED. SEE ALSO CODE PLANS, OTHER DRAWINGS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION.
3. AT WALLS NOT REQUIRED TO BE FIRE RATED SEAL ALL DUCT, PIPE AND MISCELLANEOUS PENETRATION THROUGH WALL WITH ACOUSTICAL MINERAL WOOL AND PROVIDE NON-COMBUSTIBLE SEALANT AT PERIMETER OF PENETRATION ON BOTH FACES OF WALL TO MAINTAIN STC RATING INDICATED.
4. AT WALLS NOT REQUIRED TO BE FIRE RATED SEAL AT PERIMETER OF INTERSECTIONS WITH BEAMS, JOISTS OR OTHER STRUCTURAL ELEMENTS WITH ACOUSTICAL MINERAL WOOL AND PROVIDE NON-COMBUSTIBLE SEALANT ON BOTH FACES OF WALL TO MAINTAIN STC RATING INDICATED.
5. AT ALL CONCRETE MASONRY UNIT WALLS PROVIDE RADUSED (BULL NOSED) SHAPE AT ALL EXPOSED CORNERS, TYPICAL (IF CORNERS ARE LESS OR MORE THAN 90 DEGREES AND BULL NOSE TYPE IS NOT PRACTICAL PROVIDE MITERED UNITS AND GROUND CORNER SMOOTH AND ROUND PRIOR TO FINISHING).

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
PARTITION TYPES AND ENLARGED DETAILS

100% CD Submission

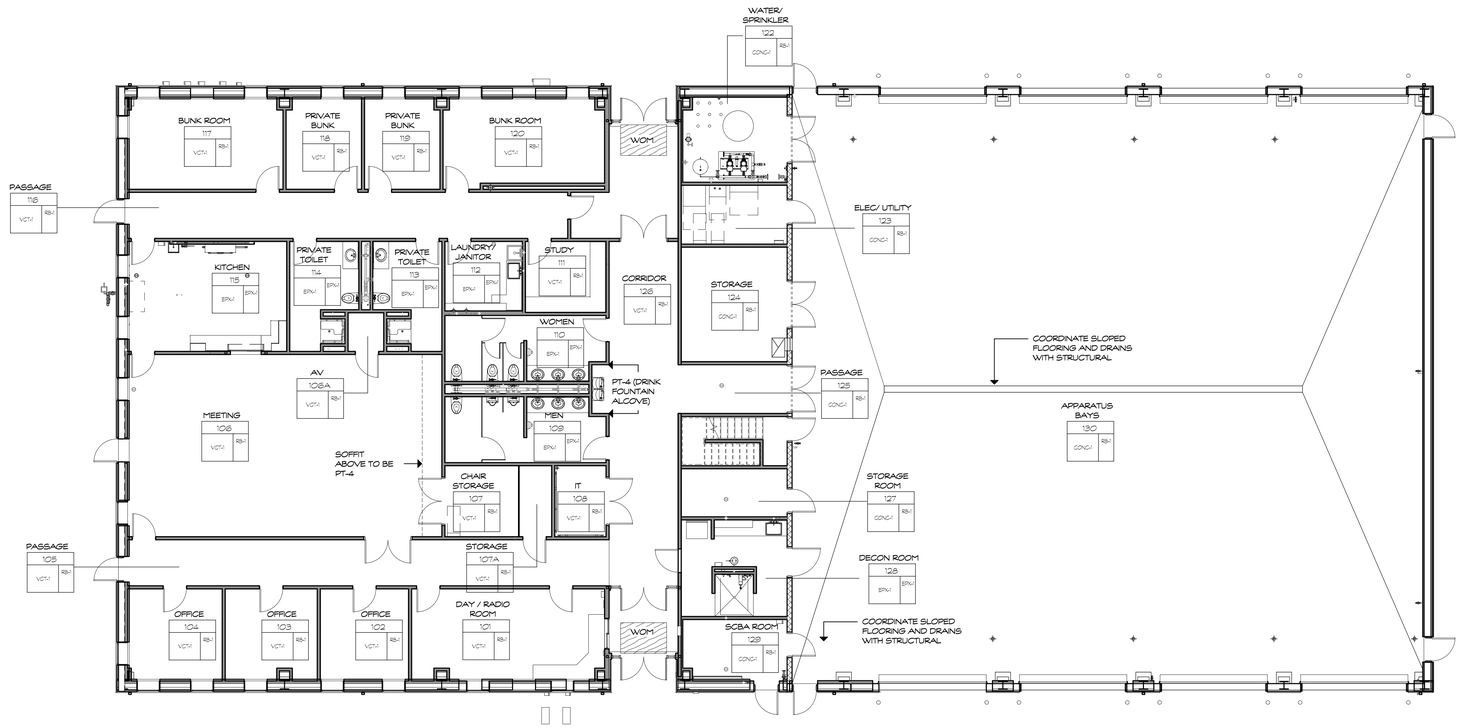
Date: 12/1/16
Drawing Number: A9.0
Scale: 1 1/2" = 1'-0"
Drawn By: BJV
Project Number: 13.220

ROOM FINISH SCHEDULE

Number	Name	Floor Finish	Base Finish	North Wall	East Wall	South Wall	West Wall	Ceiling Finish	Comments
100	VESTIBULE	VCT-1/WOM	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
101	DAY / RADIO ROOM	VCT-1	RB-1	PT-3	PT-5	PT-3	PT-3	ACT-1	
102	OFFICE	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
103	OFFICE	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
104	OFFICE	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
105	PASSAGE	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
106	MEETING	VCT-1	RB-1	PT-1	PT-1	PT-1/PT-4	PT-1	ACT-1/GWB	ALSO SEE INT. ELEV. FOR FINISHES
106A	AV	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
107	CHAIR STORAGE	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
107A	STORAGE	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
108	IT	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
109	MEN	EPX-1	EPX-1	PT-1	PT-1	PT-1	PT-1	ACT-2	
110	WOMEN	EPX-1	EPX-1	PT-1	PT-1	PT-1	PT-1	ACT-2	
111	STUDY	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
112	LAUNDRY/ JANITOR	EPX-1	EPX-1	FRP-1	FRP-1	FRP-1	FRP-1	ACT-2	
113	PRIVATE TOILET	EPX-1	EPX-1	PT-1	PT-1	PT-1	PT-1	ACT-2/GWB	
114	PRIVATE TOILET	EPX-1	EPX-1	PT-1	PT-1	PT-1	PT-1	ACT-2/GWB	
115	KITCHEN	EPX-1	EPX-1	FRP-1	FRP-1	FRP-1	FRP-1	ACT-2	
116	PASSAGE	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
117	BUNK ROOM	VCT-1	RB-1	PT-1	PT-4	PT-1	PT-1	ACT-1	
118	PRIVATE BUNK	VCT-1	RB-1	PT-3	PT-8	PT-3	PT-3	ACT-1	
119	PRIVATE BUNK	VCT-1	RB-1	PT-3	PT-6	PT-3	PT-3	ACT-1	
120	BUNK ROOM	VCT-1	RB-1	PT-3	PT-4	PT-3	PT-3	ACT-1	
121	VESTIBULE	VCT-1/WOM	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
122	WATER/ SPRINKLER	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	GWB	
123	ELEC/ UTILITY	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	ES/PT-8*	*PAINT EXPOSED STRUCT/PIPES/DUCTS
124	STORAGE	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	GWB	
125	PASSAGE	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
126	CORRIDOR	VCT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	

ROOM FINISH SCHEDULE

Number	Name	Floor Finish	Base Finish	North Wall	East Wall	South Wall	West Wall	Ceiling Finish	Comments
127	STORAGE ROOM	CONC-1	RB-1	FRP-1	FRP-1	FRP-1	FRP-1	ACT-1	
128	DECON ROOM	EPX-1	EPX-1	FRP-1	FRP-1	FRP-1	FRP-1	ACT-2/GWB	
129	SCBA ROOM	CONC-1	RB-1	FRP-1	FRP-1	FRP-1	FRP-1	GWB	
130	APPARATUS BAYS	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	ES/PT-8*	*PAINT EXPOSED STRUCT/PIPES/DUCTS
M-1	MECHANICAL MEZZANINE	PLYWD	RB-1	PT-1	PT-1	PT-1	PT-1	ES/PT-8*	
ST-1	STAIR	RST-1	RB-1	PT-1	PT-1	PT-1	PT-1	ES/PT-8*	



NORTH

MAIN LEVEL FLOOR PATTERN PLAN
SCALE: 1/8" = 1'-0"

1
A9.1

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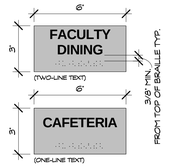
Drawing Title:
FLOOR PATTERN & FINISH SCHEDULE

100% CD Submission

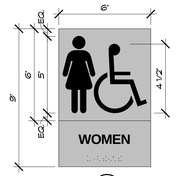
Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: BJV
Project Number: 13.220

Drawing Number:
A9.1

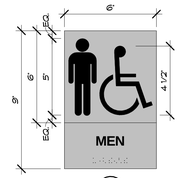
NOTE:
COORDINATE TEXT WITH AS INDICATED ON DOOR SCHEDULE, ADJUST FOR TWO-LINE TEXT.



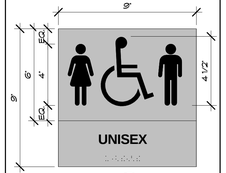
TYPE S1



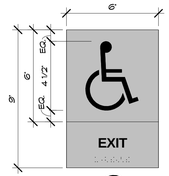
TYPE S2



TYPE S3

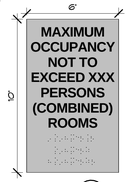


TYPE S4

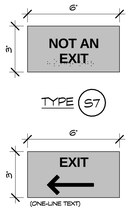


TYPE S5

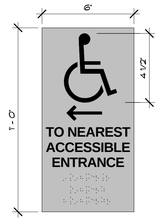
NOTE:
PROVIDE AT MULTI-PURPOSE ROOM 1 (112) AND MULTI-PURPOSE ROOM 2 (113) REFER TO CODE PLAN FOR OCCUPANT LOADS - CONFIRM ALL LOADS WITH FIRE MARSHAL PRIOR TO FABRICATION



TYPE S6



TYPE S8

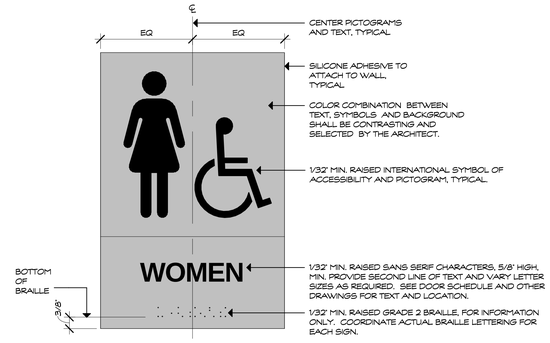


TYPE S9

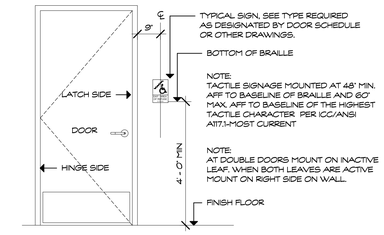
SIGNAGE NOTES:

1. SIGNS SHALL COMPLY WITH CURRENT BUILDING CODE, ANSI STANDARDS, ADA REGULATIONS & GUIDELINES, AND ALL OTHER APPLICABLE REGULATIONS.
2. TEXT ON SIGNS SHALL BE COORDINATED IN FIELD TO REFLECT ROOM USE, AND SHALL BE APPROVED BY ARCHITECT AND OWNER PRIOR TO FABRICATION.
3. SEE ALSO TYPICAL SIGN DETAIL AND TYPICAL SIGN MOUNTING DETAILS ON THIS DRAWING.

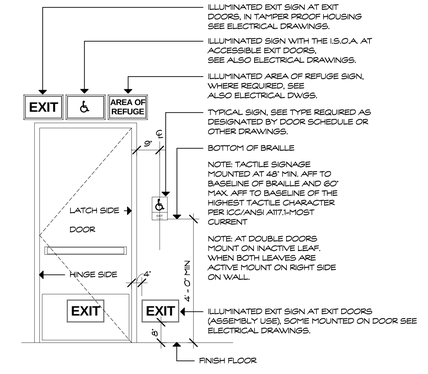
SIGNAGE TYPES (1 / A9.2)
SCALE: 3" = 1'-0"



TYPICAL SIGNAGE DETAIL (2 / A9.2)
SCALE: 6" = 1'-0"



TYPICAL SIGN MOUNTING DETAILS (3 / A9.2)
SCALE: 1/2" = 1'-0"



TYPICAL EXIT SIGN MOUNTING DETAILS (4 / A9.2)
SCALE: 1/2" = 1'-0"

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REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	BJV

Drawing Title:
SIGNAGE PLAN & DETAILS

100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: BJV
Project Number: 13.220

Drawing Number: A9.2

GENERAL STRUCTURAL NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2009 AMENDMENTS TO THE 2005 CONNECTICUT SUPPLEMENT TO THE 2003 INTERNATIONAL BUILDING CODE AND ITS APPLICABLE REFERENCED STANDARDS.
2. THE CONTRACTOR SHALL COORDINATE ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPENCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND ENGINEER OF RECORD.
3. THE CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL SLEEVES, OPENINGS AND ANCHORAGES (INCLUDING ANCHOR BOLTS) AS REQUIRED BY ALL TRADES. OPENINGS NOT SPECIFICALLY SHOWN SHALL BE APPROVED BY THE ARCHITECT AND ENGINEER OF RECORD.
4. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE FOR A SAFE AND EFFICIENT METHOD OF SHORING AND/OR BRACING THE STRUCTURE DURING CONSTRUCTION.
5. ALL WORK SHALL BE CONTINUOUSLY MONITORED AND INSPECTED BY AN INDEPENDENT TESTING AGENCY REFER TO SPECIAL INSPECTION NOTES ON THIS SHEET. SUBMIT ALL TEST AND INSPECTION REPORTS TO A/E FOR REVIEW.
6. STRUCTURAL MEMBERS SHALL NOT BE MODIFIED IN THE FIELD WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER. IN THE EVENT OF A CONSTRUCTION OR FABRICATION ERROR, THE CONTRACTOR SHALL PREPARE A SKETCH WITH A PROPOSED REPAIR, AND SUBMIT IT TO THE ARCHITECT AND ENGINEER OF RECORD. FOR APPROVAL PRIOR TO PERFORMING ANY CORRECTIVE WORK.
7. SUBMIT SHOP DRAWINGS FOR APPROVAL (FOR ALL TRADES INDICATED HEREIN) PRIOR TO PROCEEDING WITH FABRICATION AND/OR CONSTRUCTION. CONTRACTOR SHALL ALLOW FOR A 2 WEEK REVIEW PERIOD BY THE DESIGN TEAM.
8. E2 ENGINEERS IS THE STRUCTURAL ENGINEER OF RECORD (SER) RESPONSIBLE FOR THE INTERNAL MEZZANINE AND FOUNDATION DESIGN. DESIGN OF THE PRE-ENGINEERED METAL BUILDING SHALL BE THE RESPONSIBILITY OF THE SPECIALTY STRUCTURAL ENGINEER (SSE).
9. THE FOUNDATION DESIGN IS BASED UPON THE PRE-ENGINEERED METAL BUILDING SYSTEM REACTIONS. THE CONTRACTOR SHALL BE RESOPNSIBLE FOR COORDINATION OF ANY REVISIONS REQUIRED AS A RESULT OF CHANGE IN THE BUILDING MANUFACTURER, INCLUDING REDESIGN OF THE FOUNDATIONS.

DESIGN LOADS

1. ADDITIONAL 5 PSF COLLATERAL DEAD LOAD FOR PHOTOVOLTAIC ARRAY.

2. FLOOR LIVE LOAD:
   a. APPARATUS BAYS .... HS20-44 LOADING CLASS (PER IBC TABLE 1607.6)
   b. FIRST FLOOR (EXCLUDING APPARATUS BAYS) .... 100 PSF UNIFORMLY DISTRIBUTED
   c. MECHANICAL ATTIC .... 125 PSF UNIFORMLY DISTRIBUTED

3. ROOF LIVE LOAD: .... 20 PSF UNIFORMLY DISTRIBUTED

4. ROOF SNOW LOAD:
   GROUND SNOW LOAD, Pg.......... 30 PSF
   FLAT ROOF SNOW LOAD, Pf.......... 30 PSF
   SNOW EXPOSURE FACTOR, Ce 1.0
   SNOW LOAD IMPORTANCE FACTOR, Is 1.2
   THERMAL FACTOR, Ct .... 1.1 (APPARATUS BAY)

5. WIND LOAD:
   a. BASIC WINDSPEED .... 115 MPH (3-SEC. GUST)
   b. WIND LOAD IMPORTANCE FACTOR, Iw 1.15
   c. WIND EXPOSURE CATEGORY .... B - ALL DIRECTIONS
   d. INTERNAL PRESSURE COEFFICIENT, GCpi..........+/- 0.55
   e. COMPONENTS AND CLADDING LOADS ....PER IBC 1609.6.1.2

   THE APPARATUS BAY STRUCTURE (COL. LINES 2-13) SHALL BE DESIGNED AS A PARTIALLY ENCLOSED STRUCTURE.

6. EARTHQUAKE LOAD:
   a. SEISMIC IMPORTANCE FACTOR, Ie..........1.5
   b. Ss 0.214
   c. S1 .... 0.058
   d. SITE CLASS C
   e. Sds 0.171
   f. Sd1 .... 0.066
   g. SEISMIC DESIGN CATERGORY C
   h. SEISMIC RESISTING SYSTEM(S).......... ORDINARY STEEL MOMENT FRAMES
   i. DESIGN BASE SHEAR.......... 1.0 KIP
   j. SEISMIC RESPONSE COEFFICIENT, Cs 0.066
   k. RESPONSE MODIFICATION FACTOR, R.......... 3.5
   l. ANALYSIS PROCEDURE USED.......... EQUIVALENT LATERAL FORCE PROCEDURE

FOUNDATIONS

1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AS WELL AS ALL APPROPRIATE AGENCIES AND MUNICIPALITIES TO AVOID DAMAGE TO UNDERGROUND UTILITIES PRIOR TO THE START OF ANY SITE WORK.
2. FOUNDATIONS WERE DESIGNED BASED ON INFORMATION PROVIDED IN GEOTECHNICAL ENGINEERING REPORT PREPARED BY: DR. CLARENCE WELTI, P.E., P.C. DATED NOVEMBER 7, 2014
3. FOOTINGS SHALL BE STEPPED AT A MAXIMUM SLOPE OF 2 HORIZONTAL TO 1 VERTICAL, UNLESS NOTED OTHERWISE (SEE TYPICAL DETAILS).
4. REMOVE ALL TOPSOIL, EXISTING FILLS, ORGANIC MATERIALS, AND FROST DISTURBED SOILS PRIOR TO PLACING NEW FOOTINGS.
5. ALL BOTTOMS OF FOOTINGS SHALL BEAR ON A 4" CRUSHED STONE LAYER ATOP EXISTING VIRGIN SOILS OR ON CONTROLLED FILL. ALL FOUNDATIONS SHALL BEAR ON A CONTINUOUS SUBGRADE WITH A MINIMUM BEARING CAPACITY OF 6,000 PSF.
6. DURING BACKFILL OPERATIONS OF ALL FOUNDATION WALLS, THE FILL ON EITHER SIDE OF THE WALL SHALL NOT EXCEED A 2'-0" DIFFERENTIAL, UNLESS THE WALL IS DESIGNED FOR RETAINING ACTION.
7. THE FOUNDATION DESIGN IS BASED UPON THE PRE-ENGINEERED METAL BUILDING SYSTEM REACTIONS (WHICH ARE NOT AVAILABLE PRIOR TO BIDDING THE PROJECT). FOUNDATION SIZES AND REINFORCEMENT AS BASED ON COMPARABLE ANALYSIS BY SER. SER RESERVES THE RIGHT TO MAKE MODIFICATIONS TO THE FOUNDATIONS ONCE THE REACTIONS FROM THE PRE-ENGINEERED METAL BUILDING ARE RELEASED.. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ANY REVISIONS REQUIRED AS A RESULT OF CHANGE IN THE BUILDING MANUFACTURER, INCLUDING REDESIGN OF THE FOUNDATIONS.
8. THE FOOTING SUB GRADES SHALL BE ON THE NATURAL INORGANIC SOILS, OR ON A CONTROLLED FILL PLACED AFTER THE REMOVAL OF ANY EXISTING FILLS, AND FROST DISTURBED SUBSOILS (ASSUME FROST DISTURBED TO AT LEAST 2 FEET BELOW THE EXISTING GRADES). THE NATURAL SOILS MAY BE SENSITIVE TO REMOLDING WHEN WET. TO ADDRESS THIS CONDITION THERE SHALL BE A MINIMUM 4" OF 3/8" CRUSHED STONE BENEATH THE FOOTINGS ON THE NATURAL SOILS AND AS INITIAL LAYER BENEATH CONTROLLED FILLS WHERE ATOP A WET SUB GRADE. CONTROLLED FILL SHALL CONFORM TO SECTION 6.0 BELOW AND SHALL EXTEND HORIZONTALLY BEYOND THE FOOTINGS FOR A DISTANCE EQUAL TO AT LEAST THE DEPTH OF FILL BENEATH THE FOOTINGS.

THE CONTROLLED STRUCTURAL FILL SHALL CONFORM TO THE FOLLOWING OR BE 3/8" CRUSHED STONE:

PERCENT PASSING	SIEVE SIZE
100	3.5"
50-100	3/4"
25-75	NO. 4

THE 3/4" MINUS PROCESSED STONE BASE SHALL CONFORM TO THE FOLLOWING:

PERCENT PASSING	SIEVE SIZE
100	1.25"
90-100	1"
75-100	3/4"
25-60	1/4"
10-35	NO. 40
3-12	NO. 100
0-5	NO. 200

REINFORCED CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318 AND 301 REQUIREMENTS. THIS SHALL INCLUDE PROPORTIONING OF CONCRETE MIX, CONCRETE TESTING, PLACEMENT OF CONCRETE, AND CURING PROCEDURES.
2. ALL COLD WEATHER CONCRETING SHALL CONFORM TO THE REQUIREMENTS OF ACI 306. THE G.C. SHALL BE RESPONSIBLE FOR SUBMITTING A COLD WEATHER CONCRETING PROCEDURE FOR REVIEW PRIOR TO CONSTRUCTION.
3. ALL HOT WEATHER CONCRETING SHALL CONFORM TO THE REQUIREMENTS OF ACI 305. THE G.C. SHALL BE RESPONSIBLE FOR SUBMITTING A HOT WEATHER CONCRETING PROCEDURE FOR REVIEW PRIOR TO CONSTRUCTION.
4. ALL CONCRETE CURING SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN ACI 308.
5. CONCRETE SHALL HAVE THE FOLLOWING 28 DAY COMPRESSIVE STRENGTH:
   a. FOOTINGS, FOUNDATIONS.......... 3,000 PSI
   b. SLABS ON GRADE.......... 4,000 PSI (NON AIR-ENTRAINED)
   c. APPARATUS BAY SLAB ON GRADE.......... 4,000 PSI (AIR-ENTRAINED)
   d. ALL OTHER CONCRETE.......... 3,000 PSI
6. PROVIDE TOTAL AIR ENTRAINMENT OF 6% (±) FOR ALL CONCRETE EXPOSED TO WEATHER.
7. MAX. WATER/CEMENT RATIO FOR 4000 PSI CONCRETE = 0.45. PROVIDE A HIGH-RANGE WATER REDUCING ADMIXTURE IF REQUIRED TO INCREASE WORKABILITY OF THE CONCRETE.
8. CONCRETE REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615 AND HAVE THE FOLLOWING MINIMUM YIELD STRENGTH:
   a. MAIN REINFORCING STEEL .... 60 KSI
   b. TIES & STIRRUPS .... 40 KSI
9. WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A1064.
10. UNLESS NOTED OTHERWISE, PROVIDE THE FOLLOWING MINIMUM REINFORCING COVER:
   a. FOOTINGS .... 3 INCHES
   b. CONCRETE EXPOSED TO WEATHER OR EARTH.......... 2 INCHES
   c. SLABS ON GRADE (STEEL BARS) .... 2 INCHES
   d. SLABS ON GRADE (WWF) .... WWF SHALL BE PLACED AT A DISTANCE= 1/3 OF THE DEPTH FROM THE TOP OF SLAB, 11/2" MINIMUM.
11. MAXIMUM CONCRETE WALL LENGTHS BETWEEN CONSTRUCTION JOINTS SHALL BE 60 FEET.
12. PROVIDE VERTICAL CONTROL JOINTS AT A MAXIMUM SPACING OF 20 FEET O.C. FOR ALL CONTINUOUS WALLS WITH MORE THAN 12" PROJECTION ABOVE FINISH GRADE.
13. REINFORCING LAP SPLICES SHALL BE IN ACCORDANCE WITH ACI-318-02 FOR TENSION LAP SPLICES, CLASS B, UNLESS NOTED OTHERWISE. HORIZONTAL REINFORCING IN PERIMETER WALLS SHALL BE LAPPED A MINIMUM OF 48 BAR DIAMETERS.
14. PROVIDE CORNER BARS AT ALL WALL CORNERS & INTERSECTIONS MATCHING HORIZONTAL REINFORCEMENT. BARS SHALL BE LAPPED A MINIMUM OF 48 BAR DIAMETERS.
15. PLACE ALL SLABS PER ACI 301 AND ACI 302.1 SPECIFICATIONS. UNLESS NOTED OTHERWISE, PROVIDE A MINIMUM FLOOR FLATNESS Ff=25, AND, AT SLABS ON GRADE, A MINIMUM FLOOR LEVELNESS Fl=25.
16. COORDINATE ALL PENETRATIONS PRIOR TO CONSTRUCTION AND SUBMIT OPENING SIZES TO A/E FOR REVIEW.
17. SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW.
18. ALL REINFORCING STEEL SUBJECTED TO THE CORROSIVE EFFECTS OF DE-ICING MATERIALS AND VEHICULAR RUN-OFF SHALL BE EPOXY-COATED REBAR.

COLD FORM METAL FRAMING

1. ALL WORK SHALL COMPLY TO THE REQUIREMENTS OF CURRENT AISI STANDARDS AND SECTION 2209 OF THE CT. BUILDING CODE AND 2003 IBC.
2. ALL STUDS, JOISTS, RAFTERS AND ACCESSORIES SHALL HAVE A MINIMUM G60 GALVANIZED COATING IN CONFORMANCE WITH THE REQUIREMENTS OF ASTM 525.
3. THE CONTRACTOR SHALL SUBMIT ORIGINAL, DETAILED SHOP DRAWINGS SHOWING MEMBER TYPE, LOCATION, SPACING, SIZE AND GAGE OF MEMBER. METHOD OF CONNECTION TO SUPPORTING MEMBERS AND ALL NECESSARY ERECTION AND FASTENING DETAILS, INCLUDING SUPPLEMENTAL BRACING, STRAPPING, SPLICES, BRIDGING, ACCESSORIES AND DETAILS REQUIRED FOR PROPER INSTALLATION. SHOP DRAWINGS MUST BE REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PROCEEDING WITH WORK.
4. ALL GALVANIZED WALL STUDS 18 GAGE AND LIGHTER AND ALL TRACK ACCESSORIES 16 GAGE AND LIGHTER SHALL BE FORMED WITH STEEL THAT CONFORMS TO THE REQUIREMENTS OF ASTM A446 GRADE A, W/ A MINIMUM YIELD STRESS OF 33 KSI. ALL STUDS 16 GAGE AND HEAVIER SHALL CONFORM TO THE REQUIREMENTS OF ASTM A446, GRADE D W/ A MINIMUM YIELD STRESS OF 50 KSI.
5. ALL WALL STUDS ARE "C" SHAPED STEEL STUDS. PROVIDE RUNNER TRACK TOP AND BOTTOM FOR ALL WALLS USING SAME GAGE. EXTERIOR WALLS SHALL BE SIZED BY OTHERS.
6. ALL WALLS ARE TO HAVE HORIZONTAL STRAP BRIDGING WHICH SHALL BE INSTALLED AND PROPERLY ATTACHED TO EACH STUD TO PREVENT MINOR AXIS BENDING AND ROTATION PRIOR TO WALLS BEING LOADED. BRIDGING SHALL BE DESIGNED FOR MINIMUM ALLOWABLE CONSTRUCTION LOADS AND SHALL NOT EXCEED 4'-0" O.C. VERTICAL SPACING. SEE TYPICAL LIGHT GAGE METAL WALL FRAMING DETAILS.
7. INSTALL WALL STUDS AT OPENINGS AS SHOWN ON TYPICAL LIGHT GAGE METAL WALL FRAMING DETAILS.
8. ALL FASTENERS CONNECTION LIGHT GAGE MEMBERS TO STRUCTURAL STEEL, CMU & CONC. STRUCTURE SHALL BE DESIGNED BY OTHERS.
9. STRUCTURAL PROPERTIES OF COMPONENTS SHALL BE PER THE LATEST EDITION OF AISI.
10. ALL TRACKS SPECIFICALLY NOT CALLED OUT ON THE DRAWINGS SHALL BE OF THE SAME GAGE AS THE WALL STUDS OR HEAVIER.
11. DESIGN OF COLD-FORM METAL FRAMING SYSTEMS AND THEIR CONNECTIONS TO STRUCTURE TO BE PROVIDED BY OTHERS. CONTRACTOR SHALL SUBMIT CURTAIN WALL DESIGN, WITH CALCULATIONS AND DESIGN DRAWINGS, TO STRUCTURAL ENGINEER OF RECORD FOR REVIEW. SUBMIT COPY TO LOCAL CODE OFFICIAL FOR RECORD. ALL SUBMITTALS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER LICENSED AND IN GOOD STANDINGS WITH THE STATE OF THE PROJECT LOCATION.

REINFORCED MASONRY

1. WALLS INDICATED ON STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY. SEE ARCHITECTURAL DRAWINGS FOR TYPE, LOCATION, THICKNESS AND COMPOSITION OF MASONRY WALLS.
2. MATERIALS:
   a.HOLLOW LOAD BEARING UNITS (NORMAL WEIGHT UNITS): ASTM C 90
   b.MORTAR : (TYPE S) ASTM C 270 (COMPRESSIVE STRENGTH OF MASONRY , f'm=1500 PSI)
   c.GROUT FOR REINFORCED MASONRY: ASTM C 476 (COMPRESSIVE STRENGTH AT 28 DAYS = 2000 PSI)
   d.SOLID LOAD BEARING UNITS: (GRADE N-1) ASTM C 145
3. MASONRY WALL REINFORCING:
   a) 1-#5 BAR AT 32" ON CENTER.
   b) 1-#5 BARS AT BOTH SIDES OF DOOR, WINDOW AND MECHANICAL OPENINGS.
   c) 1-#5 BAR MINIMUM ABOVE AND BELOW ALL WINDOW AND MECHANICAL OPENINGS AND ABOVE ALL DOOR OPENINGS. UNLESS OTHERWISE INDICATED ON PLANS
   d) 2-#5 AT TOP OF ALL WALLS, AND AT BOND BEAMS CONNECTED TO FLOORS AND ROOFS, UNLESS OTHERWISE INDICATED.
   e) 1-#5 BARS AT ENDS OF ALL WALLS, AND EACH SIDE OF CONTROL JOINTS. 3-#5 AT WALL CORNERS.
   f) STANDARD LADUR TYPE DESIGN DUR-O-WAL HORIZONTAL REINFORCING AT 16" O.C. VERT AND HORIZ. PROVIDE MASONRY VENEER TIES AT SAME SPACING.
4. ALL VERTICAL WALL REINFORCING SHALL BE CONTINUOUS FOR THE FULL HEIGHT OF MASONRY WALLS, INCLUDING THROUGH CONTINUOUS MASONRY BOND BEAMS UNLESS OTHERWISE INDICATED.
5. CELLS CONTAINING REINFORCING BARS AND ALL CELLS BELOW GRADE SHALL BE GROUTED SOLID. ALL OTHER CELLS SHALL REMAIN HOLLOW EXCEPT WHERE NOTED.
6. FURNISH BOND BEAM LINTELS, UNLESS OTHER LINTELS ARE INDICATED, FOR ALL OPENINGS IN MASONRY WALLS FOR DOORS, WINDOWS, MECHANICAL OPENINGS, ETC. SEE BOND BEAM LINTEL SCHEDULE FOR SIZE AND BEARING.
7. ALL BOLTS OR ANCHORS SHALL BE SOLIDLY EMBEDDED IN MORTAR OR GROUT. IF BOND BEAM IS NOT LOCATED AT BOLT OR ANCHOR ELEVATION, PROVIDE LATH AND FILL CELL LOCALLY TO PROVIDE SUBSTRATE FOR BOLT OR ANCHOR. GROUT CELL ABOVE ALL MASONRY ANCHORS.
8. PROVIDE CONTINUOUS GROUTED BOND BEAM WHERE MASONRY ANCHORS CONNECT CONCRETE MASONRY TO STEEL FRAMING. GROUT CELL ABOVE ANCHOR.
9. HOLLOW UNITS SHALL BE LAID WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS, EXCEPT THAT WEBS SHALL ALSO BE BEDDED IN ALL COURSES OF BEARING AND SHEAR WALLS, PIERS, COLUMNS AND PILASTERS, AND IN THE STARTING COURSE ON FOOTINGS AND SOLID FOUNDATION WALLS, AND WHERE ADJACENT TO CELLS OR CAVITIES WHICH ARE TO BE REINFORCED AND/OR FILLED WITH GROUT.
10. MORTAR PROTRUSIONS EXTENDING INTO CELLS OR CAVITIES TO BE REINFORCED AND/OR GROUTED SHALL BE REMOVED.
11. ALL MASONRY WALLS SHALL BE BRACED AT THE TOP UNLESS BRACED HORIZONTALLY BY COLUMNS OR INTERSECTING WALLS. MAXIMUM BRACING SPACING SHALL NOT EXCEED 11 FEET FOR 4" WALLS, 16 FEET FOR 6" WALLS, 20 FEET FOR 8" WALLS, 25 FEET FOR 10" WALLS AND 32 FEET FOR 12" WALLS.
12. IN MASONRY WALLS, NO CHASES, RISERS, CONDUITS, OR TOOTHING OF MASONRY SHALL OCCUR WITHIN 17" OF CENTER OF BEAM BEARING OR LOAD CONCENTRATION.
13. SOLID UNITS SHALL BE LAID WITH FULL HEAD AND BED JOINTS.
14. ALL INTERSECTING LOAD BEARING WALLS SHALL BE TIED TOGETHER IN MASONRY RUNNING BOND UNLESS NOTED OTHERWISE.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND PROVIDING ADEQUATE TEMPORARY SHORING OF THE CMU WALLS UNTIL THE ROOF STEEL IS ERECTED AND PROPERLY ATTACHED.
16. MINIMUM DEVELOPMENT LENGTH AND LAP SPLICE LENGTH OF MASONRY REINFORCING SHALL BE AS FOLLOWS (UNLESS OTHERWISE INDICATED ON PLANS):

BAR SIZE	DEVELOPMENT LENGTH	LAP SPLICE LENGTH
#4	18"	24"
#5	25"	30"
#6	27"	36"
#7	32"	42"

STRUCTURAL STEEL

1. ALL WORK SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS AND ITS CODE OF STANDARD PRACTICE.
2. MATERIAL SPECIFICATIONS:
   W, WT SHAPES ....ASTM A992 (50 KSI)
   S, M, HP, C, MC SHAPES.......... ASTM A572, GRADE 50
   SQUARE & RECTANGULAR HSS ....ASTM A500, GRADE B (50 KSI)
   ROUND HSS .... ASTM A500, GRADE C (46 KSI)
   L SHAPES, MISC. PLATES & BARS.......... ASTM A36
   BOLTS .... ASTM A325
   ANCHOR RODS .... ASTM F1554, GRADE 36
   SHEAR STUD CONNECTORS .... ASTM A109
   PIPE COLUMNS.......... ASTM A53
3. ALL WELDING OPERATIONS SHALL BE PERFORMED BY AWS CERTIFIED WELDERS IN CONFORMANCE WITH ALL APPLICABLE REQUIREMENTS. USE E-70xx WELDING ELECTRODES.
4. STRUCTURAL STEEL CONNECTIONS SHALL BE DESIGNED FOR THE LOADS INDICATED ON THE PLANS. IF NO LOAD IS INDICATED, THE CONNECTION SHALL BE DESIGNED FOR 1/2 THE MEMBER'S UNIFORM LOAD CARRYING CAPACITY IN ACCORDANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION (ALLOWABLE STRESS DESIGN).
5. ALL BOLTED CONNECTIONS SHALL USE 3/4" DIA., ASTM A325 BOLTS OR A-490 BOLTS, UNLESS NOTED OTHERWISE. BOLTED CONNECTIONS SHALL BE DESIGNED PER THE AISC MANUAL OF STEEL CONSTRUCTION, 9TH ED. (ASD) AND THE RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS (ASD). CONNECTIONS SHALL BE SNUG-TIGHT, U.N.O.
6. ALL NEW STRUCTURAL STEEL SHALL BE GIVEN ONE COAT OF AN APPROVED SHOP PRIMER APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, UNLESS NOTED OTHERWISE. SURFACE PREPARATION OF STEEL PRIOR TO SHOP PAINTING SHALL CONFORM TO SSPC SP6.
7. AFTER ERECTION IS COMPLETE, TOUCH-UP ALL SHOP PRIMED COATS DAMAGED DURING TRANSPORTATION AND ERECTION, AND PRIME ALL FIELD WELDS USING THE SAME PAINT USED FOR SHOP PRIMING.
8. ALL EXPOSED STRUCTURAL STEEL AND CONNECTIONS SHALL BE HOT-DIP GALVANIZED, OR MAY BE PRIMED AND PAINTED WITH AN APPROVED EPOXY PAINT SYSTEM. TOUCH UP ALL CONNECTIONS AND DAMAGED SURFACES WITH THE SAME PAINT SYSTEM.
9. MOMENT CONNECTIONS SHALL BE DESIGNED TO DEVELOP THE REACTIONS SHOWN ON THE DRAWINGS.
10. STRUCTURAL STEEL FRAME SHALL BE LEVEL AND PLUMB PRIOR TO COMPLETING CONNECTIONS.
11. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.

PRE-ENGINEERED METAL BUILDING

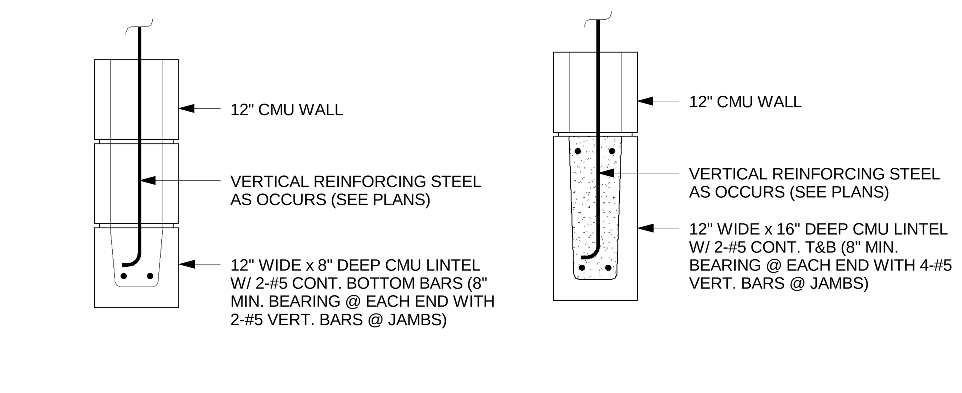
1. THE ENTIRE PRE-ENGINEERED METAL BUILDING SYSTEM SHALL BE DESIGNED BY THE METAL BUILDING MANUFACTURER IN CONFORMANCE TO THE PROVISIONS OF THE 2009 AMENDMENT TO THE 2003 INTERNATIONAL BUILDING CODE AND ASCE7-02
2. THE BUILDING SHALL BE DESIGNED BY THE MANUFACTURER AS A COMPLETE SYSTEM. ALL COMPONENTS OF THE SYSTEM SHALL BE SUPPLIED OR SPECIFIED BY THE SAME MANUFACTURER.
3. ALL MANUFACTURE DRAWINGS AND DESIGN CALCULATIONS SHALL BEAR THE PROFESSIONAL SEAL AND SIGNATURE OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CONNECTICUT.
4. FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH MBMA METAL BUILDING SYSTEMS MANUAL, AND, FOR ITEMS NOT COVERED, AISC - SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
5. THE PRE-ENGINEERED METAL BUILDING MANUFACTURER SHALL BE CERTIFIED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION CATEGORY MB. THE MANUFACTURER SHALL MEET THE "EXCEPTION" NOTED PER THE IBC, WHICH SPECIFIES QUALITY CONTROL REQUIREMENTS OF THE MANUFACTURER PERTAINING TO "SPECIAL INSPECTIONS"
6. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE ENTIRE METAL BUILDING SYSTEM FOR REVIEW. THE CONTRACTOR SHALL ALSO SUBMIT A COMPLETE STRUCTURAL DESIGN ANALYSIS OF THE BUILDING SYSTEM (FOR RECORD ONLY). THE SHOP DRAWING SUBMITTAL SHALL INCLUDE ALL ANCHOR BOLT REQUIREMENTS AND FOUNDATION REACTIONS.
7. DESIGN LOADS TO BE USED IN CONNECTION WITH THE METAL BUILDING DESIGN ARE PER THE "DESIGN LOADS" NOTES ON THIS DRAWING. IN ADDITION TO THE ACTUAL DEAD LOAD, AN ADDITIONAL COLLATERAL ROOF FRAMING DEAD LOAD OF 5 PSF SHALL BE INCLUDED. COORDINATE EQUIPMENT LOADS WITH THE MECHANICAL AND ARCHITECTURAL DRAWINGS.
8. CALCULATIONS FOR FRAME DEFLECTIONS SHALL BE DONE USING ONLY THE BARE FRAME METHOD. REDUCTIONS BASED ON ENGINEERING JUDGEMENT USING ASSUMED COMPOSITE STIFFNESS OF THE BUILDING ENVELOPE SHALL NOT BE PERMITTED. DRIFT SHALL FOLLOW AISC'S "SERVICEABILITY DESIGN CONSIDERATIONS FOR LOW-RISE BUILDINGS". CALCULATIONS SHALL BE SUBMITTED VERIFYING THAT THE ACTUAL DRIFT UNDER CODE REQUIRED LOADINGS DOES NOT EXCEED THE ALLOWABLE.
9. DEFLECTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE AISC STEEL DESIGN GUIDE SERIES 3 - "SERVICEABILITY DESIGN CONSIDERATIONS FOR STEEL BUILDINGS".
10. THE PRE-ENGINEERED MANUFACTURER SHALL PROVIDE ALL GIRTS, PURLINS, AND OTHER COMPONENTS REQUIRED FOR A COMPLETE SYSTEM. ALL WALL SYSTEMS, SUCH AS METAL STUDS, STOREFRONTS, ETC. SHALL BE PROPERLY SUPPORTED BY THE METAL BUILDING SYSTEM. ALLOWABLE DEFLECTIONS OF COMPONENTS SHALL BE IN ACCORDANCE WITH THE 2005 IBC.
11. THE FOUNDATION DESIGN IS BASED UPON THE PRE-ENGINEERED METAL BUILDING SYSTEM REACTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ANY REVISIONS REQUIRED AS A RESULT OF CHANGE IN THE BUILDING MANUFACTURER, INCLUDING REDESIGN OF THE FOUNDATIONS.
12. THE SIZE, NUMBER, AND PLACEMENT PATTERN OF ALL ANCHOR BOLTS SHALL BE DETERMINED BY THE PRE-ENGINEERED METAL BUILDING MANUFACTURER.
13. THE PRE-ENGINEERED METAL BUILDING SHALL BE DESIGNED BY THE MANUFACTURER TO RESIST LATERAL LOADS AS FOLLOWS; INTERIOR FRAME LINES - RIGID FRAMES WITH PINNED -BASED COLUMNS, PERIMETER FRAME LINES - PORTAL FRAMES.
14. THE METAL BUILDING ERECTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING.
15. UNLESS OTHERWISE NOTED OR SPECIFIED, ALL STRUCTURAL STEEL MEMBERS SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH THE MANUFACTURERS STANDARD PROCEDURES. COORDINATE STEEL FINISH WITH ARCHITECT.
16. THE APPARATUS BAY STRUCTURE (COL. LINES 2-13) SHALL BE DESIGNED AS A PARTIALLY ENCLOSED STRUCTURE.
17. G.C. TO NOTE THAT IF ALTERNATE 2 IS SELECTED AS THE BUILD OPTION, THE FOLLOWING APPLIES TO THE PEMB:
   1. ALL EXTERIOR WALLS THAT HAVE BRICK MASONRY VENEER SHALL BE FRAMED WITH HORIZONTAL WIND GIRTS THAT ARE SPACED 16" ON CENTER VERTICALLY. ALL WIND GIRTS SHALL COMPLY TO AN L/600 LIVE LOAD DEFLECTION CRITERIA FOR ALL LIVE LOAD COMBINATIONS (LL, SL, EL AND WL.)
   2. THE PRE-ENGINEERED METAL BUILDING FRAME SHALL COMPLY TO L/600 LIVE LOAD DEFLECTION CRITERIA FOR ALL LIVE LOAD COMBINATIONS (LL, SL, EL AND WL.)
   3. DUE TO COORDINATION ISSUES WITH OTHER DISCIPLINES, THE PEMB FRAME ITSELF SHALL NOT GROW IN DEPTH BEYOND THE LIMITS ALLOCATED FOR THE SUPERSTRUCTURE IN THE BID DOCUMENTS, RATHER THE FRAME MEMBERS MAY NEED TO INCREASE LOCALLY IN THICKNESS IN STEEL PLATE.

STRUCTURAL LUMBER / ROUGH CARPENTRY

1. ALL WORK SHALL BE IN CONFORMANCE WITH THE AMERICAN FOREST AND PAPER ASSOCIATION STANDARDS AND SPECIFICATIONS.
2. ALL FLOOR DECK SHALL BE 3/4" FIRE-RETARDANT TREATED ADVANTECH OSB FLOOR DECKING.
3. ALL FLOOR DECKING SHALL BE INSTALLED WITH ANGULAR RING NAILS (STAPLES SHALL NOT BE PERMITTED) WITH INSTALLATION PROCEDURES CONFORMING TO THE GOVERNING AGENCY STAMPED ON THE SHEETS.
4. ALL PLYWOOD AND STRUCTURAL USE PANELS SHALL CONFORM TO THE REQUIREMENTS OF THE APA - THE ENGINEERED WOOD ASSOCIATION.

SPECIAL INSPECTIONS

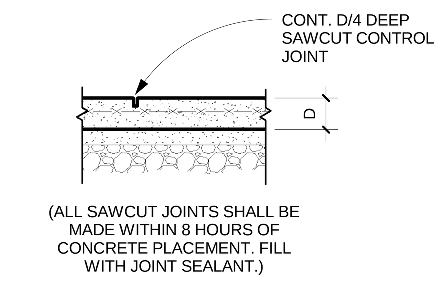
1. SPECIAL INSPECTION IS REQUIRED PER CHAPTER 17 OF THE CONNECTICUT STATE BUILDING CODE, FOR THE FOLLOWING ITEMS:
   a. STRUCTURAL STEEL, INCLUDING JOISTS AND METAL DECK
   b. CONCRETE
   c. MASONRY
   d. COLD-FORMED STEEL FRAMING
2. THE OWNER SHALL RETAIN AND PAY FOR AN INDEPENDENT THIRD PARTY INSPECTION AGENCY TO OVERSEE THE SPECIAL INSPECTION PROCESS. REFER TO THE SPECIAL INSPECTION TR1 FORM.



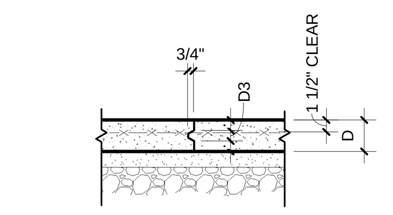
NON-BEARING WALLS UP TO 5'-4" WIDE
BEARING/EXTERIOR WALLS UP TO 3'-4" WIDE

NON-BEARING WALLS OVER 7'-4" WIDE UP TO 10'-0" WIDE
BEARING/EXTERIOR WALLS OVER 5'-4" WIDE UP TO 9'-8" WIDE

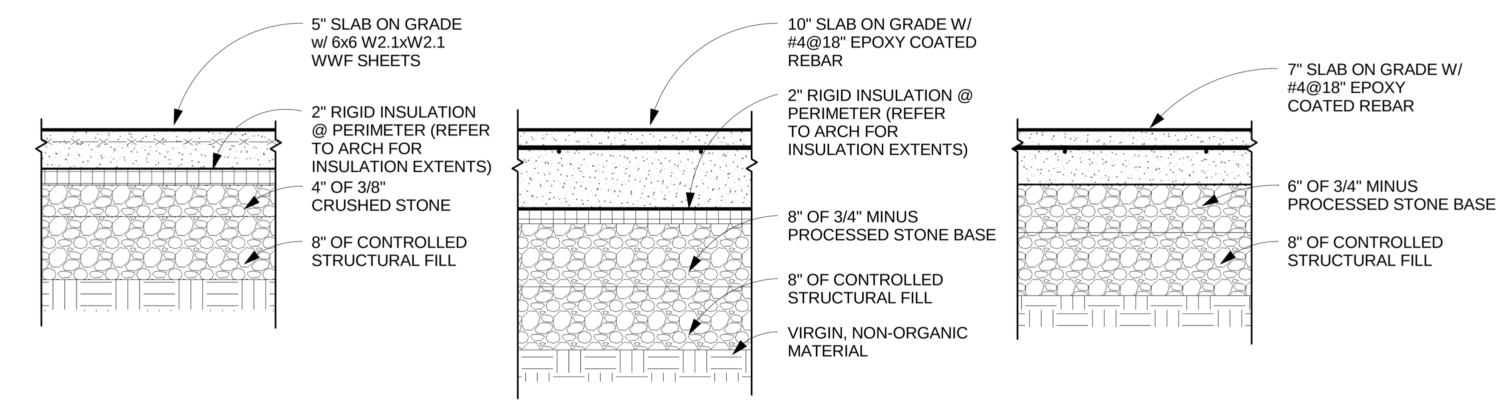
TYP. CMU BOND BEAM LINTEL DETAIL
1/2" = 1'-0"



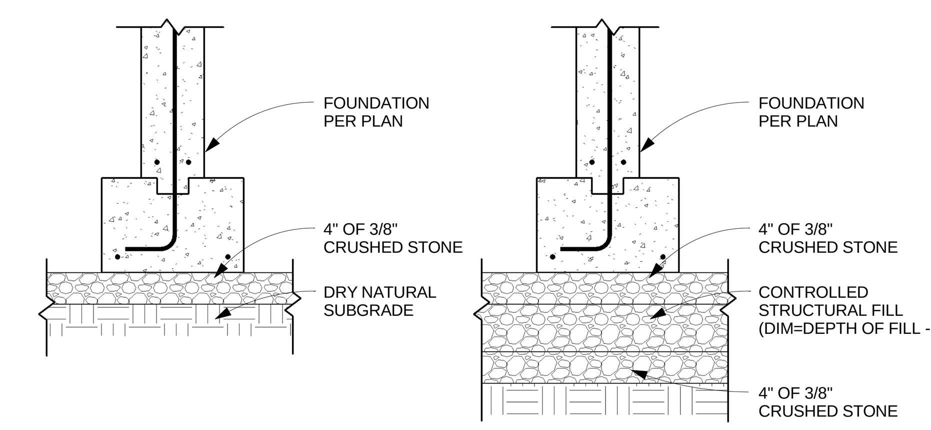
TYP. SLAB CONTROL JOINT DETAIL
3/4" = 1'-0"



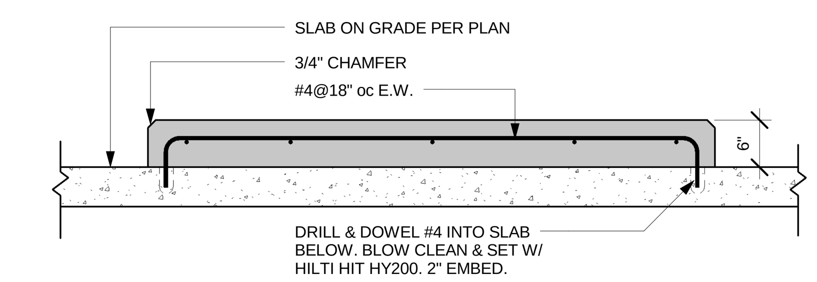
TYP. SLAB ON GRADE CONST. JOINT
3/4" = 1'-0"



TYPICAL SLAB ON GRADE DETAILS
3/4" = 1'-0"



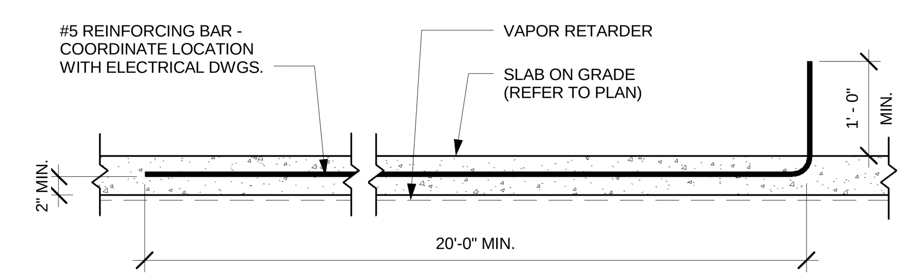
FOOTING SUBGRADE DETAILS
3/4" = 1'-0"



TYPICAL HOUSEKEEPING PAD DETAIL
3/4" = 1'-0"

ABBREVIATIONS

@	AT	HOR.	HORIZONTAL
BRG.	BEARING	I.F., I/F	INSIDE FACE
BD.	BOARD	MFR	MANUFACTURER
B.O.F.	BOTTOM OF FOOTING	oc	ON CENTER
BTM	BOTTOM	O.F., O/F	OUTSIDE FACE
BTWN	BETWEEN	PMBM	PRE-ENGINEERED METAL BLDG. MFR.
CMU	CONCRETE MASONRY	PL.	PLATE
COL.	COLUMN	P.T.	PRESSURE TREATED
CONC.	CONCRETE	PROV'D	PROVIDE
CONT.	CONTINUOUS	REQ'D	REQUIRED
COORD.	COORDINATE	REINF.	REINFORCING
C.W.A.	COORD. W/ ARCH.	S/W	SHEARWALL
C.W.C.	COORD. W/ CIVIL ENGR.	SCHED.	SCHEDULE
DBL.	DOUBLE	STD.	STANDARD
DIA.	DIAMETER	STL	STEEL
EA.	EACH	TEMP.	TEMPORARY
E.C.	EPOXY-COATED	T/	TOP OF
E.F.	EACH FACE	T.O.P.	TOP OF PIER
ENGR.	ENGINEER	T.O.S.	TOP OF SLAB
EQ.	EQUAL	T.O.STL.	TOP OF STEEL
EX.	EXISTING	T.O.W.	TOP OF WALL
E.W.	EACH WAY	TRPL.	TRIPLE
FDN., FOUND.	FOUNDATION	TYP.	TYPICAL
FTG.	FOOTING	U.N.O.	UNLESS NOTED OTHERWISE
HDR.	HEADER	VERT.	VERTICAL
		V.I.F.	VERIFY IN FIELD
		W/	WITH



NOTE:
CONCRETE ENCASED ELECTRODE SHALL CONSIST OF AT LEAST 20'-0" OF EITHER OF THE FOLLOWING:

1. ONE OR MORE BARS OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTIVE COATED STEEL REINFORCING BARS OR RODS OF NOT LESS THAN 1/2" DIAMETER, INSTALLED IN ONE CONTINUOUS 20'-0" LENGTH, OR IF IN MULTIPLE PIECES CONNECTED TOGETHER BY THE USUAL STEEL TIE WIRES, EXOTHERMIC WELDING, WELDING OR OTHER EFFECTIVE MEANS TO CREATE 20'-0" OR GREATER LENGTH.
2. BARE COPPER CONDUCTOR NOT SMALLER THAN 4 AWG.
3. METALLIC COMPONENTS SHALL BE ENCASED BY AT LEAST 2" OF CONCRETE AND SHALL BE LOCATED HORIZONTALLY WITHIN THAT PORTION OF CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH EARTH.

TYP. SLAB ON GRADE ELECTRICAL GROUNDING DETAIL
3/4" = 1'-0"

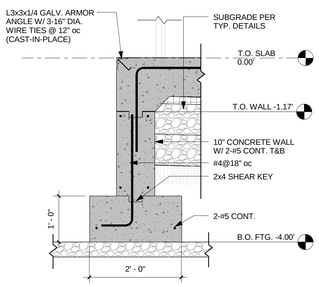
Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

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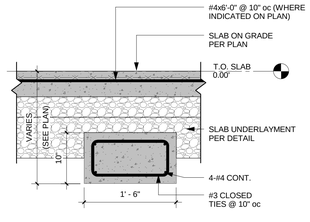
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	KEM

Drawing Title:
Structural Notes
100% CD Submission

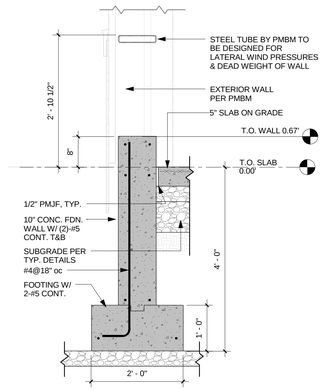
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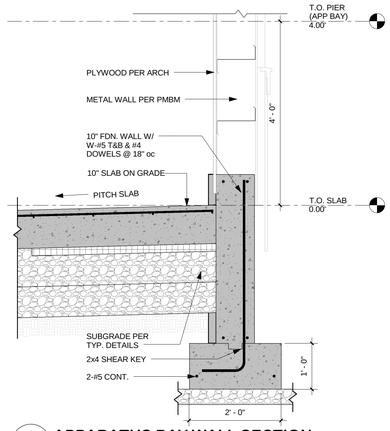
2 S100 TYP. GARAGE OPENING SLAB DETAIL
3/4" = 1'-0"



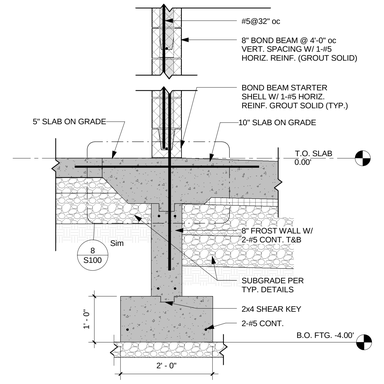
3 S100 TYP. TIE BEAM SECTION
1" = 1'-0"



4 S100 TYP. FDN. WALL DETAIL
3/4" = 1'-0"



5 S100 APPARATUS BAY WALL SECTION
1" = 1'-0"



6 S100 FROST WALL BENEATH CMU
3/4" = 1'-0"

FOUNDATION NOTES

1. T/SLAB ELEVATION = 0.00' U.N.O. COORD. T/SLAB ELEVATIONS W/ ARCH. PRIOR TO CONSTRUCTION.
2. COORDINATE ALL DIMENSIONS, ELEVATIONS, DOOR & WINDOW LOCATIONS w/ARCH. DRAWINGS AND/OR EXISTING CONDITIONS.
3. COORDINATE ALL WALL PENETRATIONS, UNDERSLAB UTILITIES AND MECHANICAL CHASES W/ APPLICABLE TRADES.
4. XX.XX' - INDICATES TOP OF FOUNDATION WALL ELEVATION
5. X.XX' - INDICATES TOP OF SLAB ELEVATION
6. [XX.XX'] - INDICATES BOTTOM OF FOOTING ELEVATION.
7. ALL FOUNDATION WALLS WILL BE 10" CONCRETE WALLS W/ 2-#5 CONT. TOP & BTM. W/ #4 VERT. @ 18" oc
8. SJ - INDICATES CONCRETE SAWCUT CONTROL JOINT (SEE TYP. CONCRETE DETAILS).
9. CP# - INDICATES REINF CONC. PIER (SEE PIER SCHEDULE)
10. F# - INDICATES FOOTING (SEE FOOTING SCHEDULE)
11. TB - INDICATES 18"W X 10"D TIE BEAM (SEE TIE BEAM DETAILS ON THIS SHEET). BTM OF TIE BEAM ELEV = -1'-10" TYP. BTM. OF TIE BEAM GRID 6 THROUGH GRID 9 = -3'-10".
12. BP# - INDICATES STEEL BASE PLATE (SEE BASE PLATE DETAILS ON THIS SHEET).
13. FOUNDATIONS SHOWN ON THIS DRAWING WERE DESIGNED PER ANALYSIS OF METAL FRAMING BY S.E.R. ACTUAL FOUNDATION DESIGN MAY VARY ONCE G.C. IS SELECTED & PEMB DESIGN IS SUBMITTED TO ENGINEER FOR REVIEW.
14. ANCHOR BOLT DESIGN NOT COMPLETED AND IS CONTINGENT ON FINAL DESIGN OF PRE-ENGINEERED METAL BUILDING. G.C. TO CARRY $10,000 CONTINGENCY FOR ANCHOR BOLTS.
15. ALL AREAS OF CONCRETE SLABS THAT ARE TO RECEIVE MOISTURE-SENSITIVE FLOORING TREATMENTS SHALL BE TESTED FOR MOISTURE CONTENT PRIOR TO FLOORING APPLICATION. TEST RESULTS SHALL COMPLY WITH FLOORING MANUFACTERER'S MOISTURE REQUIREMENTS.
16. C1 - INDICATES HSS3 1/2x3 1/2x1/4 STEEL COLUMN.

FOOTING SCHEDULE

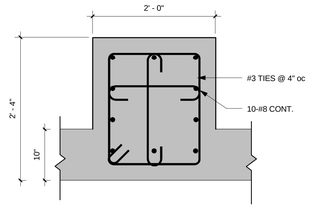
F#	LENGTH	WIDTH	THICKNESS	REINFORCEMENT
F2.0	2' - 0"	2' - 0"	1' - 0"	3-#5 E.W. BTM.
F8.0	8' - 0"	8' - 0"	1' - 4"	#6@12" oc E.W. T&B

REINFORCED CONCRETE PIER SCHEDULE

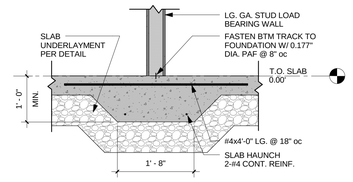
PIER DESIGNATION	PIER DIMENSIONS (L x W)	VERTICAL REINFORCING	TOP OF PIER
CP1	28" x 24"	10-#8, #3 TIES @ 4" o/c	(SEE PLAN)
CP2	12" x 12"	4-#6, #3 TIES @ 12" o/c	(SEE PLAN)

NOTES:

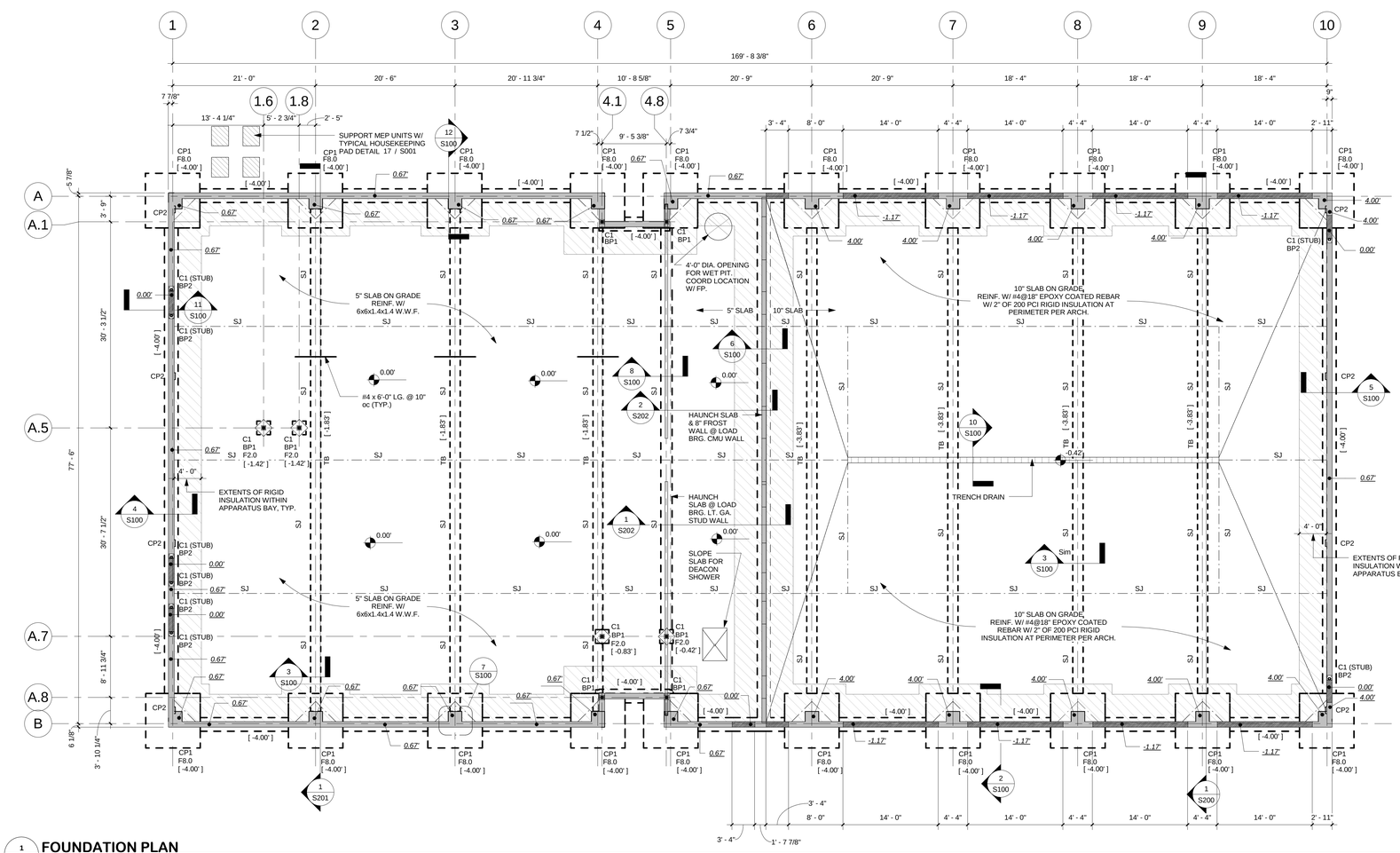
1. WALL REINFORCING SHALL BE CONTINUOUS THRU PIERS.



7 S100 CP1 DETAIL
1" = 1'-0"

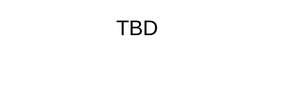


8 S100 TYP. SLAB HAUNCH DETAIL
3/4" = 1'-0"

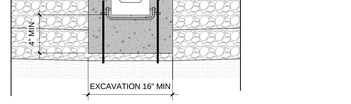


1 S100 FOUNDATION PLAN
1/8" = 1'-0"

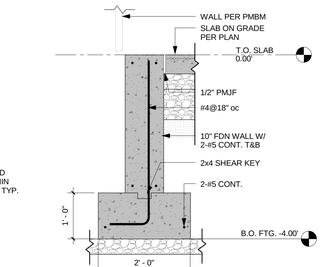
TBD



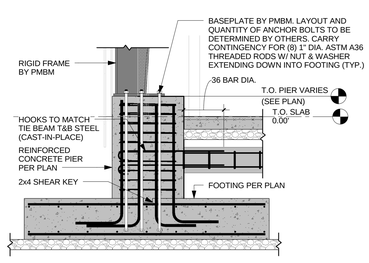
9 S100 TYP. PMBM BASE PLATE
1 1/2" = 1'-0"



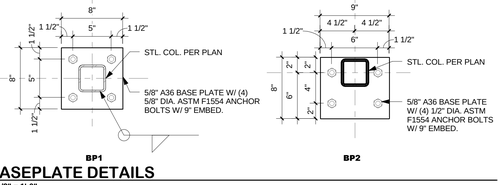
10 S100 TYPICAL TRENCH DRAIN DETAIL
3/4" = 1'-0"



11 S100 TYP. FDN WALL AT DOOR DETAIL
3/4" = 1'-0"



12 S100 TYP. RIGID FRAME PIER DETAIL
1/2" = 1'-0"



13 S100 BASEPLATE DETAILS
1 1/2" = 1'-0"

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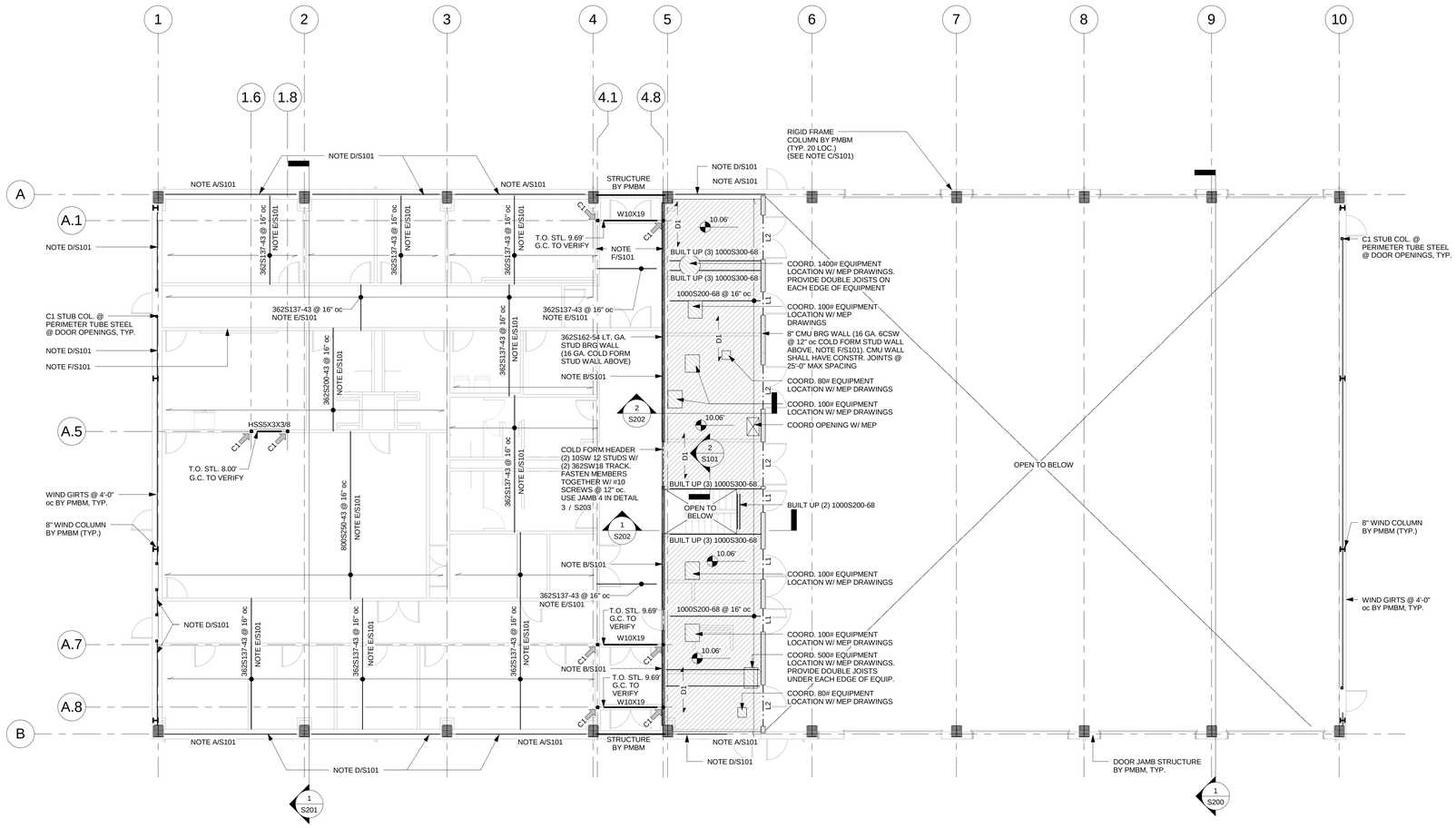
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	KEM

Drawing Title: Foundation Plan

100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: KEM
Project Number: 13.220

Drawing Number: S100



1 S101 — 2ND FLOOR FRAMING PLAN

1/8" = 1'-0"

FRAMING PLAN NOTES

1. TOP OF 3/4" PLYWOOD SUBFLOOR DECK ELEVATION= 10.00' UNLESS NOTED OTHERWISE.
   X.XX' - INDICATES FLOOR DECK ELEVATION.
2. D1 - INDICATES SPAN DIRECTION OF FIRE-RETARDANT TREATED 3/4" TONGUE & GROOVE ADVANTECH FLOOR DECKING. DECKING SHALL BE FASTENED TO JOISTS AT 6" O.C.
3. COORD ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. COORD ALL WALL PENETRATIONS, UTILITIES AND MECHANICAL CHASES WITH APPLICABLE TRADES.
5. 1000S200-68 - INDICATES 14GA 10" FLOOR JOIST.
6. PMBM - INDICATES PRE-ENGINEERED METAL BUILDING MANUFACTURER.
7. ALL STRUCTURAL SIZES SHOWN FOR PRE-ENGINEERED METAL BUILDING ARE FOR INFORMATION PURPOSES ONLY. ACTUAL STRUCTURAL MEMBER SIZES, WEIGHTS AND FRAMING CONNECTIONS ARE TO BE DETERMINED BY PMBM.
8. DL - INDICATES DEAD LOAD
   SL - INDICATES SNOW LOAD
9. C1 - INDICATES HSS3 1/2-3 1/2-1/4 STEEL COLUMN.

NOTE A/S101
AREA DESIGNATED FOR BRACED BAY LINES IF NEEDED. PMBM SHALL COORDINATE LIMITS OF BRACED BAYS WITH ARCHITECTURAL AND MEP DRAWINGS.

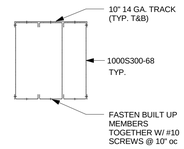
NOTE B/S101
LIGHT GAGE X-BRACED WALL (SEE SHEET S202).

NOTE C/S101
LIMIT PMBM FRAME BASE TO 12" DEEP x 14" WIDE.

NOTE D/S101
PMBM TO DESIGN TUBE STEEL AT OFFICE BAY PERIMETER AS SHOWN IN DETAIL 4 / S100

NOTE E/S101
CEILING FRAMING TO BE A MINIMUM OF ONE SPAN AND BEAR ON METAL STUD WALLS. G.C. TO COORDINATE LAYOUT WITH MEP DUCTS/PIPES. MAXIMUM SPANS AS FOLLOWS:
362S137-43: 13'-0"
362S200-43: 15'-0"
800S250-43: 24'-6"
PROVIDE COMPRESSION FLANGE BRACING AT MIDSPAN.

NOTE F/S101
G.C. TO PROVIDE DIAGONAL BRACING BACK TO PEMB FOR FULL HEIGHT STUD WALLS, TYP.



2 S101 — BUILT UP COLD FORM BEAM

1 1/2" = 1'-0"

LOOSE LINTEL SCHEDULE

SPAN CONDITION		STEEL LINTEL (PER 4" WYTHE)
L1	UP TO 5'-6"	L4 x 3 1/2 x 5/16 (LLV) GALV. - 6" END BEARING
L2	5'-6" UP TO 8'-0"	L5 x 3 1/2 x 5/16 (LLV) GALV. - 6" END BEARING
L3	8'-0" UP TO 10'-0"	L6 x 3 1/2 x 3/8 (LLV) GALV. - 6" END BEARING

NOTES:
1. FOR OPENING WIDTHS GREATER THAN SHOWN, CONSULT STRUCTURAL ENGINEER.
2. & SEE ARCH. DRAWINGS FOR FLASHING DETAILS @ WINDOW DOOR OPENINGS.

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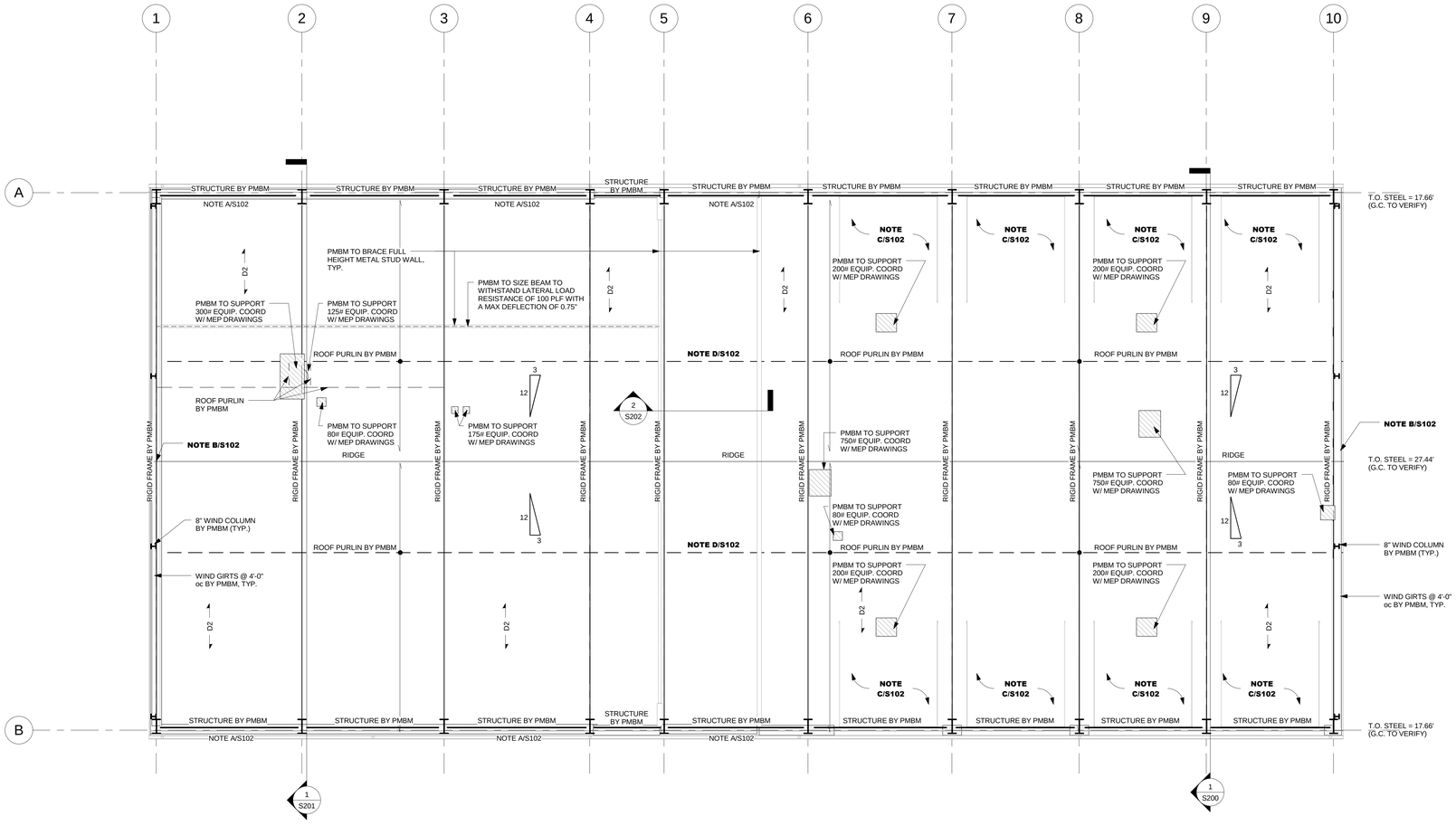
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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	KEM

Drawing Title: Second Floor Framing Plan

100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: KEM
Project Number: 13.220
Drawing Number: S101



ROOF FRAMING PLAN

1 S102 — 1/8" = 1'-0"

FRAMING PLAN NOTES

1. ◂—— D2 ——▸ - INDICATES SPAN DIRECTION OF ROOF PANEL BY PMBM.
2. SEE ARCHITECTURAL DRAWINGS FOR ROOF LIMITS AND OVERHANG DETAILS .
3. COORD ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. COORD ALL ROOF PENETRATIONS, UTILITIES AND MECHANICAL CHASES WITH APPLICABLE TRADES.
5. C# - INDICATES STEEL COLUMN (SEE COLUMN SCHEDULE)
6. FRAMES & FRAMING FOR LINES 1-10 SHALL BE DESIGNED AS A PARTIALLY ENCLOSED STRUCTURE (REFER TO ASCE 7-02).
7. PMBM - INDICATES PRE-ENGINEERED METAL BUILDING MANUFACTURER.
8. ALL STRUCTURAL SIZES SHOWN FOR PRE-ENGINEERED METAL BUILDING ARE FOR INFORMATION PURPOSES ONLY. ACTUAL STRUCTURAL MEMBER SIZES, WEIGHTS AND FRAMING CONNECTIONS ARE TO BE DETERMINED BY PMBM.
9. ALL SUSPENDED GRIDS ARE TO BE HUNG AND SUPPORTED BY THE PMBM. THE GC IS SOLELY RESPONSIBLE FOR THE STRUCTURAL DESIGN OF THIS SYSTEM IN ADDITION TO ANY ADDITIONAL STRUCTURE REQUIRED TO PROPERLY FACILITATE THE INSTALLATION OF THE SUSPENDED GRID CEILING(S).

STEEL COLUMN SCHEDULE

C#	COLUMN TYPE
C1	HSS3-1/2X3-1/2X1/4

NOTE A/S102
AREA DESIGNATED FOR BRACED BAY LINES IF NEEDED. PMBM SHALL COORDINATE LIMITS OF BRACED BAYS WITH ARCHITECTURAL AND MEP DRAWINGS.

NOTE B/S102
PMBM TO PROVIDE STRUCTURE FOR OPENINGS FOR LOUVERS (COORDINATE WITH ARCHITECTURAL AND HVAC DRAWINGS.)

NOTE C/S102
PMBM TO PROVIDE STRUCTURE TO SUPPORT GARAGE DOORS (APPROXIMATELY 400LBS, VERIFY ACTUAL GARAGE DOOR WEIGHT) (COORDINATE WITH ARCHITECTURAL DRAWINGS.)

NOTE D/S102
ROOF PURLINS SHALL HAVE A TOTAL DEFLECTION LESS THAN 0.75" IN BAY BETWEEN GRIDS 5&6 TO AVOID DAMAGE OF PARTITION FRAMED TO UNDERSIDE OF ROOF PURLINS.

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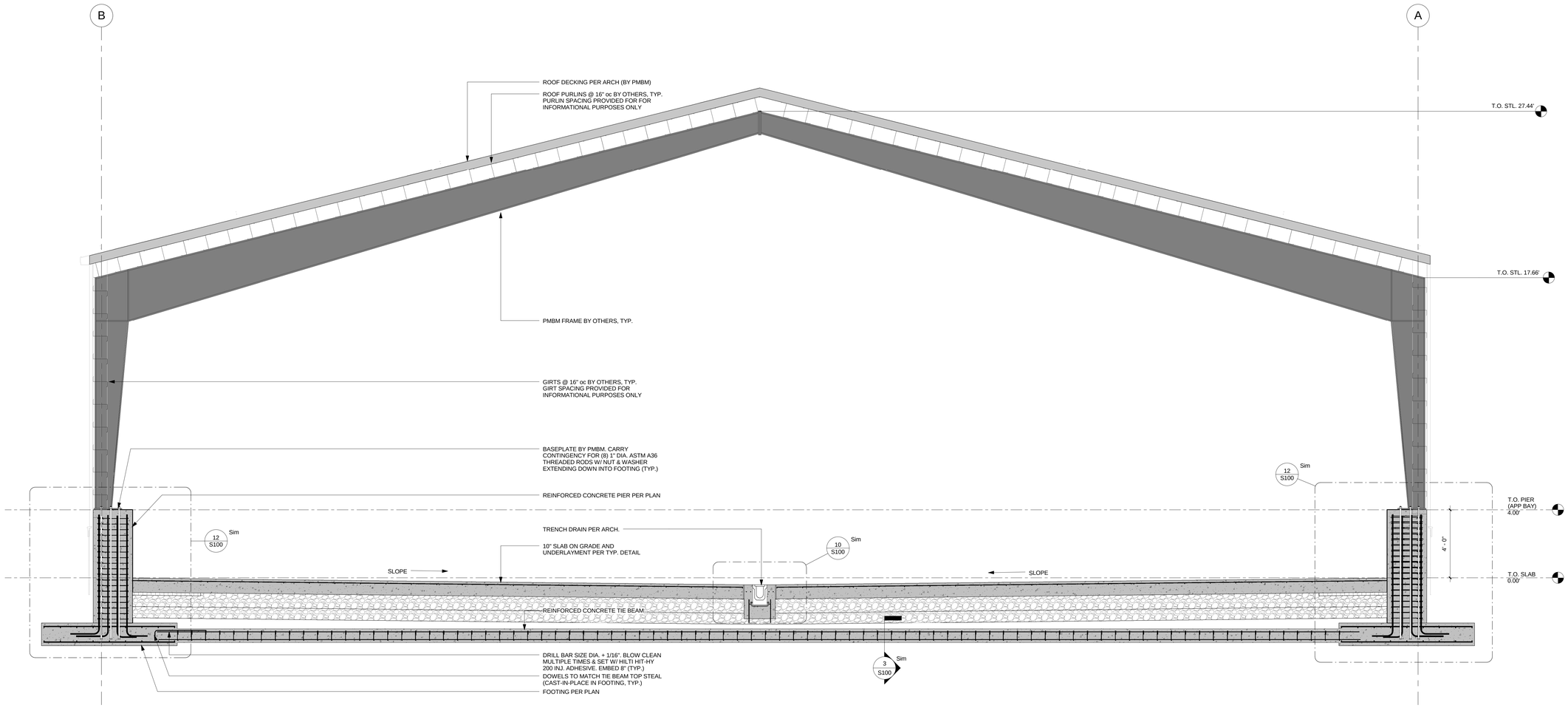
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	KEM

Drawing Title: Roof Framing Plan

100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: KEM
Project Number: 13.220

Drawing Number: S102



1 / S200 TYP. APPARATUS BAY SECTION

3/8" = 1'-0"

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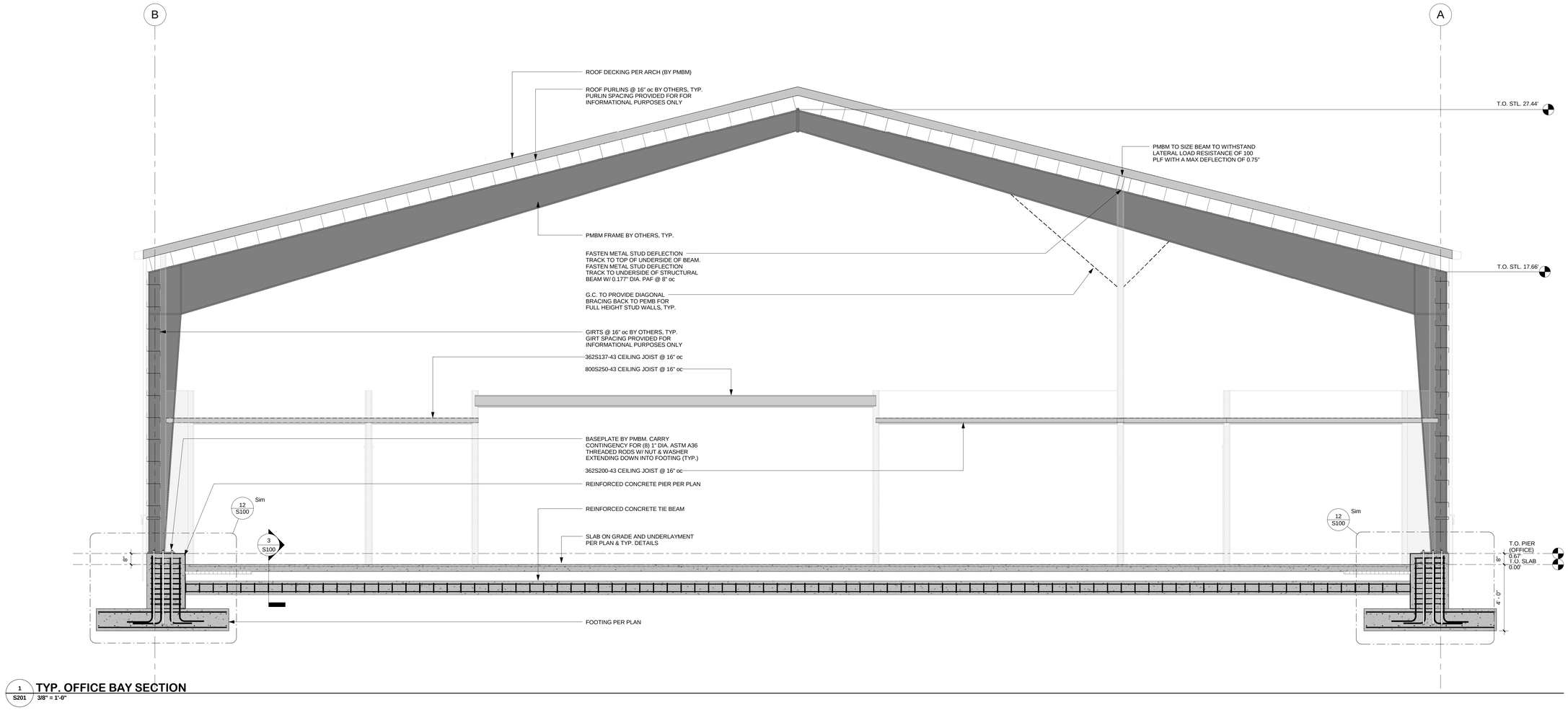
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	KEM

Drawing Title:
Typical Apparatus Bay Sections

100% CD Submission

Date: 12/1/16
Scale: 3/8" = 1'-0"
Drawn By: KEM
Project Number: 13.220

Drawing Number:
S200



1 / S201 TYP. OFFICE BAY SECTION
3/8" = 1'-0"

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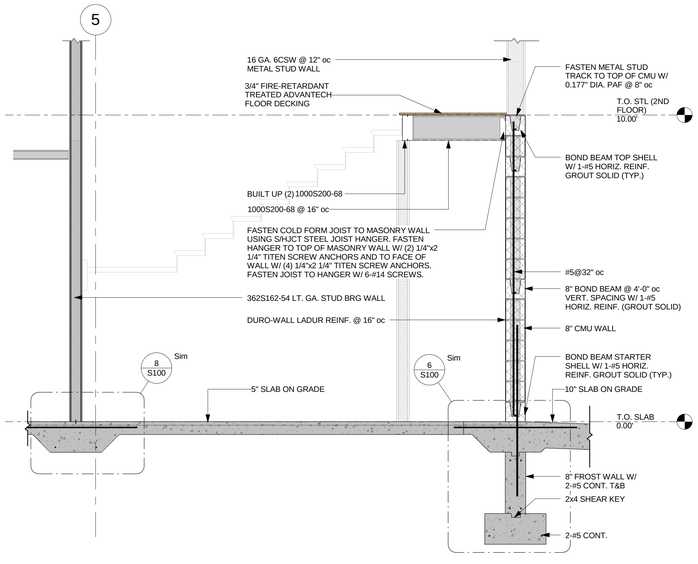
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	KEM

Drawing Title:
Typical Office Bay Sections and
Typical Details

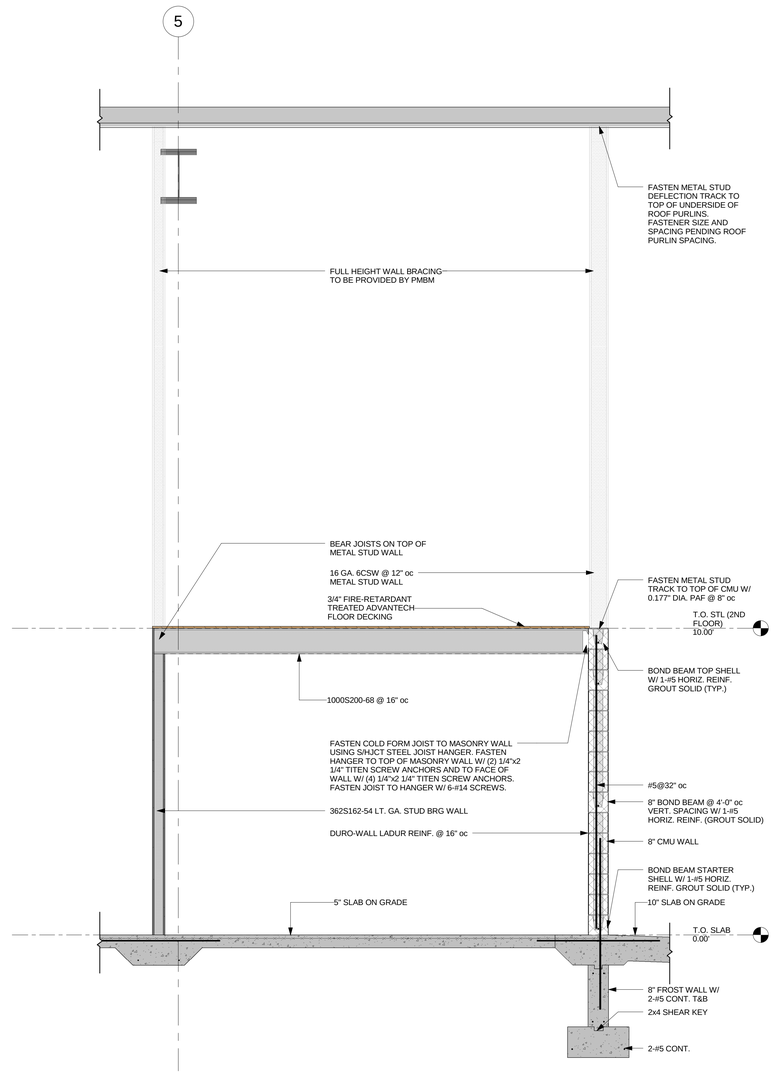
100% CD Submission

Date: 12/1/16
Scale: 3/8" = 1'-0"
Drawn By: KEM
Project Number: 13.220

Drawing Number:
S201



1 S202 **SECTION THROUGH SECOND FLR.**
1/2" = 1'-0"



2 S202 **TYPICAL MEZZANINE SECTION**
1/2" = 1'-0"

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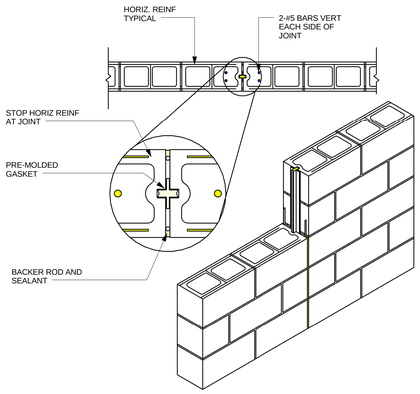
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	KEM

Drawing Title:
Typical Sections

100% CD Submission

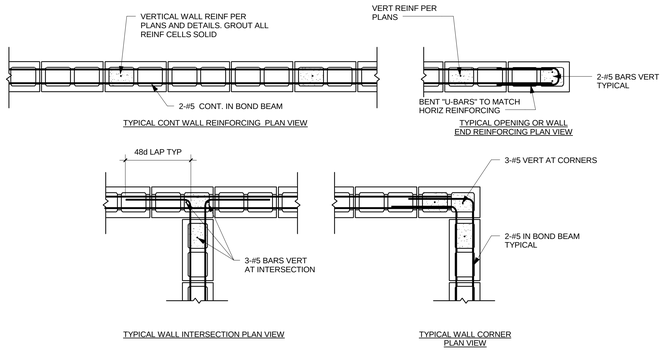
Date: 12/1/16
Scale: 1/2" = 1'-0"
Drawn By: KEM
Project Number: 13.220

Drawing Number:
S202



TYPICAL CMU CONTROL JOINT DETAIL

NTS

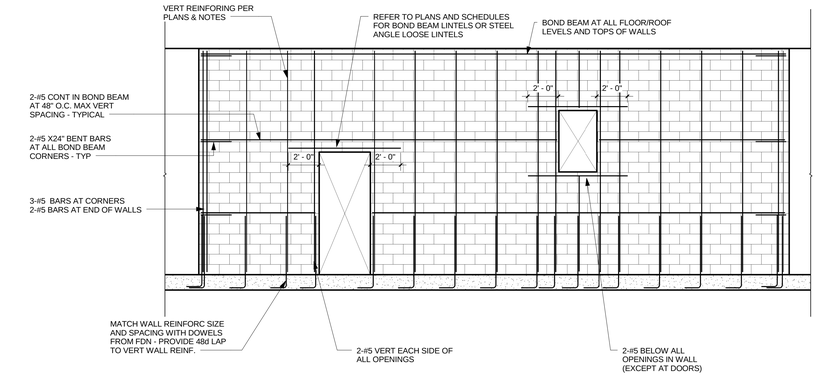


TYPICAL CMU REINFORCING DETAIL

NTS

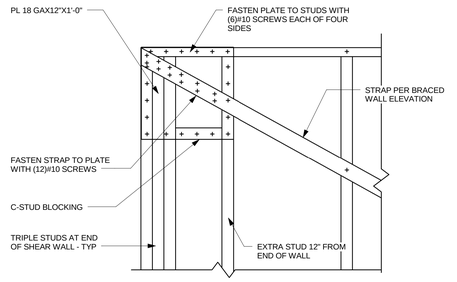
1 S203 TYPICAL CMU WALL REINFORCING

1/2" = 1'-0"



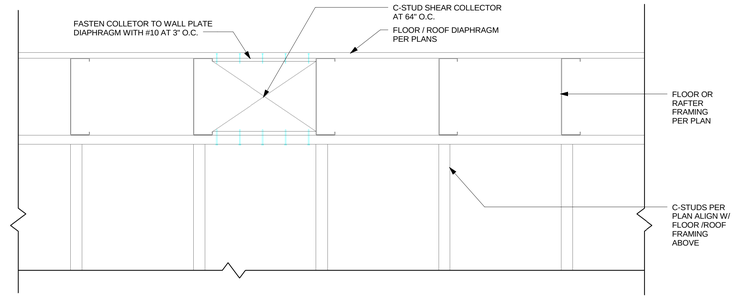
2 S203 TYPICAL CMU WALL ELEVATION

1/4" = 1'-0"



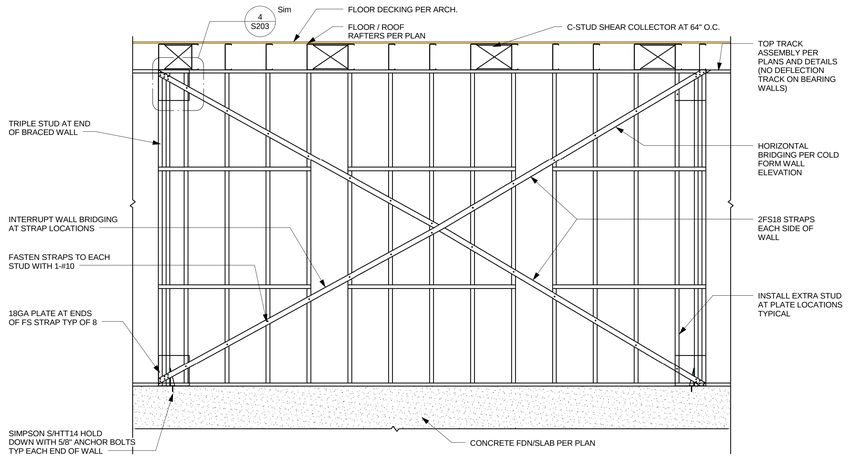
4 S203 COLD FORM BRACED WALL DETAIL

1 1/2" = 1'-0"



5 S203 COLD FORM BRACED WALL DETAIL

1 1/2" = 1'-0"



BEARING LIGHT GAGE (COLD-FORM) OPENING FRAMING SCHEDULE						
WINDOW/DOOR OPENING SIZES	JAMB		HEADER		SILL	
	TYPE	MEMBERS	TYPE	MEMBERS	TYPE	MEMBERS
OVER STUD SPACING THRU 3'-0"	(1)	1 - 6" STUD 1 - 6" TRACK	(3)	2-4SW16 STUDS 2-6SW18 TRACK	(1)	1 - 6" TRACK
OVER 3'-0" THRU 5'-0"	(2)	2 - 6" STUD 1 - 6" TRACK	(3)	2-6SW18 STUDS 2-6SW18 TRACK	(1)	1 - 6" TRACK
OVER 5'-0" THRU 6'-0"	(3)	2 - 6" STUD 2 - 6" TRACK	(3)	2-6SW16 STUDS 2-6SW18 TRACK	(2)	1 - 6" STUD 2 - 6" TRACK
OVER 6'-0" THRU 7'-0"	(3)	2 - 6" STUD 2 - 6" TRACK	(3)	2-8SW18 STUDS 2-6SW18 TRACK	(2)	1 - 6" STUD 2 - 6" TRACK
OVER 7'-0" THRU 10'-0"	(4)	3 - 6" STUD 2 - 6" TRACK	(3)	2-8SW16 STUDS 2-6SW18 TRACK	(2)	1 - 6" STUD 2 - 6" TRACK

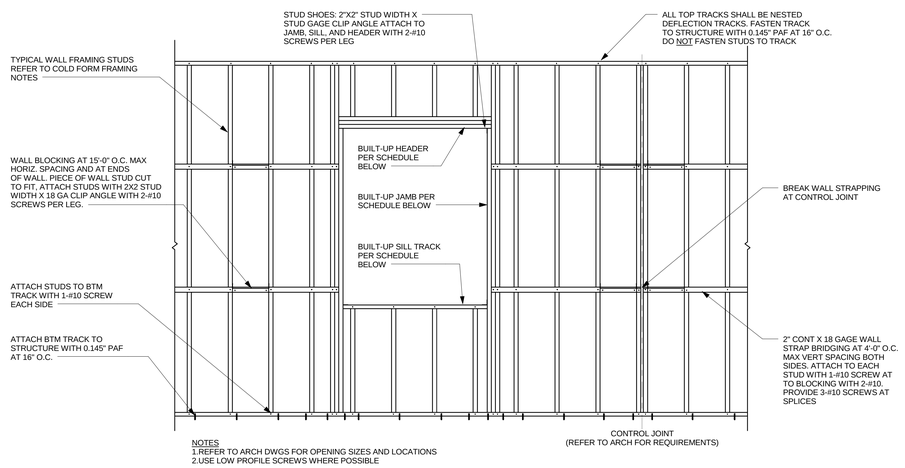
NOTES
1. ATTACH ALL BUILT-UP MEMBERS TOGETHER WITH #10 SCREWS AT 12" O.C. AT LOCATIONS SHOWN.
2. SILL IS NOT REQUIRED AT DOOR OPENINGS.
3. JAMB MEMBERS ARE FULL HEIGHT. PROVIDE NESTED DOUBLE CRIPPLE STUD UNLESS OTHERWISE NOTED.
4. STUD AND TRACK SIZES ARE SAME SIZE AND GAGE AS WALL STUDS UNLESS OTHERWISE NOTED
5. FOR WINDOW AND DOOR OPENINGS LARGER THAN 10'-0" REFER TO STRUCTURAL PLANS FOR SUPPLEMENTAL WIND FRAMING AROUND OPENING.

	JAMB 1		HEADER 1		SILL 1
	JAMB 2		HEADER 2		SILL 2
	JAMB 3		HEADER 3		
	JAMB 4		HEADER 4		

THESE SCHEDULES ARE GENERATED FOR THE FOLLOWING CRITERIA:
WALL HEIGHT = 14 FT (MAX)
WIND LOAD: 120 MPH, EXPOSURE B
DEFLECTION CRITERIA = L/240
STUD SPACING = 16" O.C.

3 S203 COLD FORM BRACED/LOAD BEARING WALL ELEVATION

1/2" = 1'-0"



NOTES
1.REFER TO ARCH DWGS FOR OPENING SIZES AND LOCATIONS
2.USE LOW PROFILE SCREWS WHERE POSSIBLE

6 S203 TYPICAL COLD FORM WALL ELEVATION

1/2" = 1'-0"

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North Stonington, Connecticut 06359

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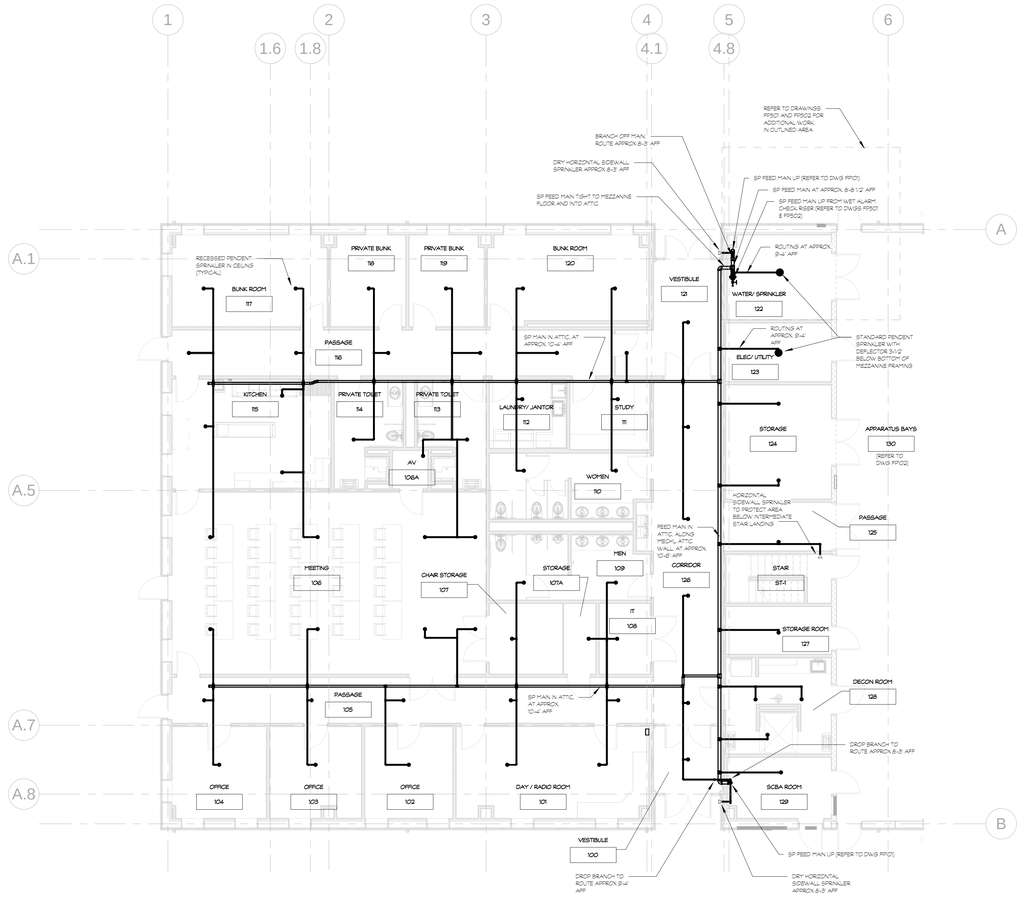
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	KEM

Drawing Title:
Typical Structural Details

100% CD Submission

Date: 12/1/16
Scale: As indicated
Drawn By: Author
Project Number: 13.220

Drawing Number: S203



1 FP01 ADMINISTRATION AREA FIRE PROTECTION PLAN
SCALE: 1/8" = 1'-0"

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

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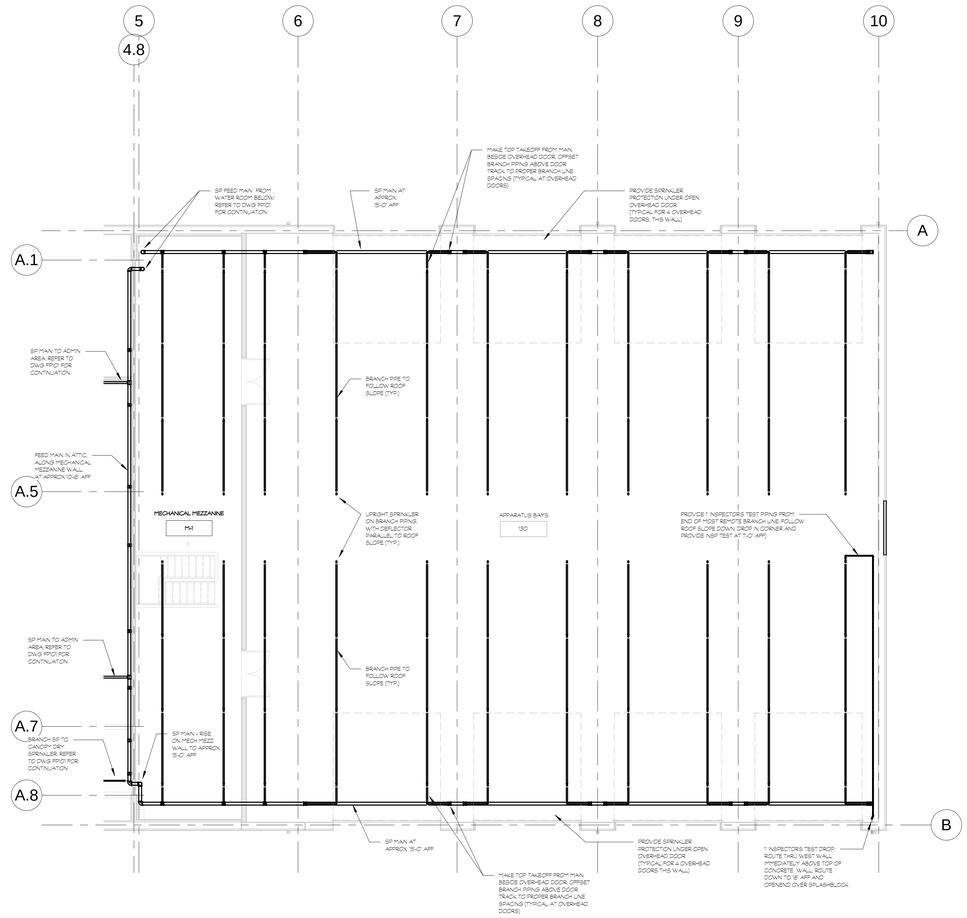
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
ADMINISTRATION AREA FIRE PROTECTION PLAN

100% CD Submission

Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: MBQ
Project Number: 13.220

Drawing Number: FP101



1 FP102 MECHANICAL MEZZANINE AND APPARATUS BAYS FIRE PROTECTION PLAN
SCALE: 1/8" = 1'-0"

Project Title:
Town of North Stonington
New Center for Emergency Services
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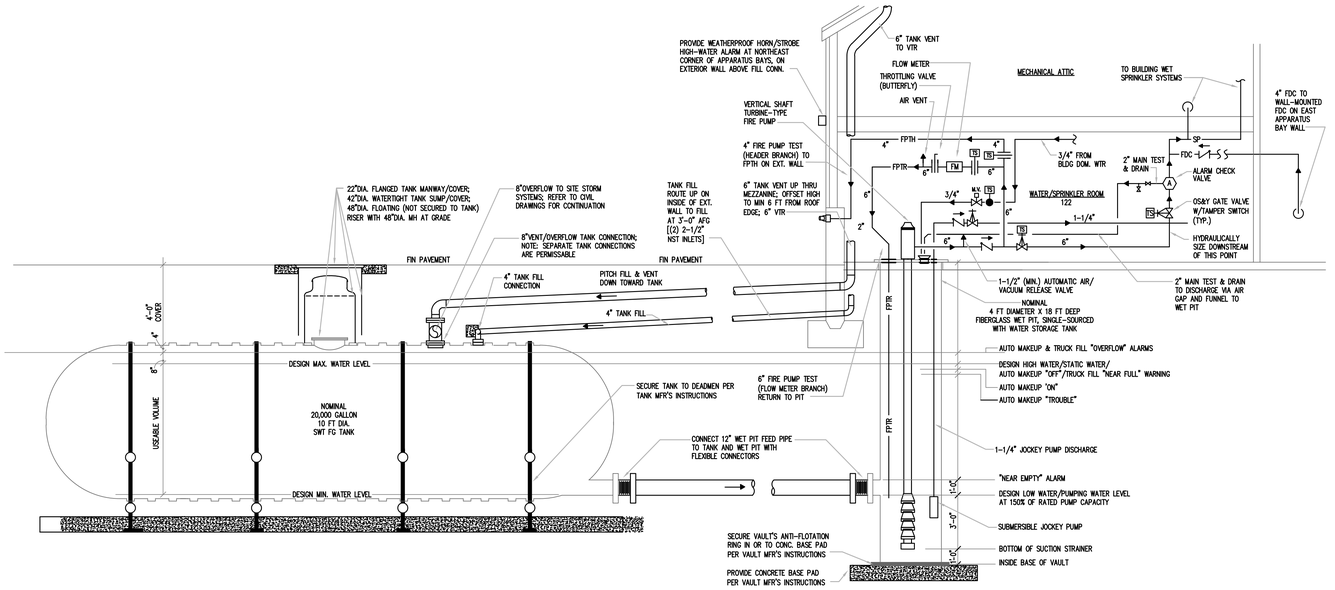
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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MECHANICAL MEZZANINE AND APPARATUS BAYS FIRE PROTECTION PLAN
100% CD Submission

Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: MBQ
Project Number: 13.220

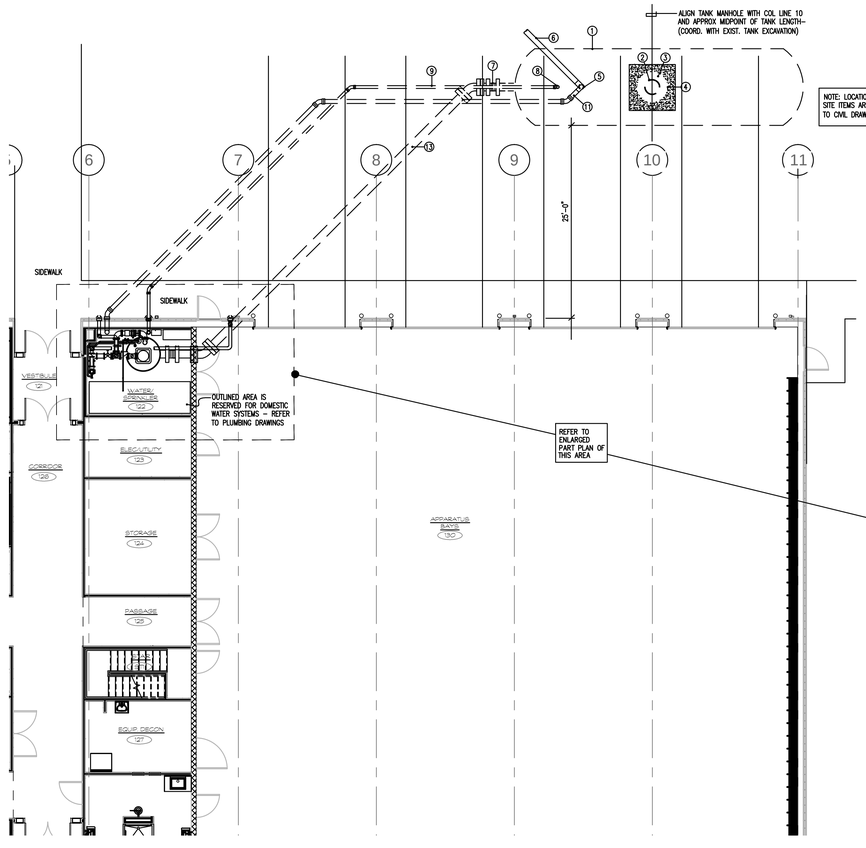
Drawing Number:
FP102



FIRE PROTECTION WATER SUPPLY SCHEMATIC

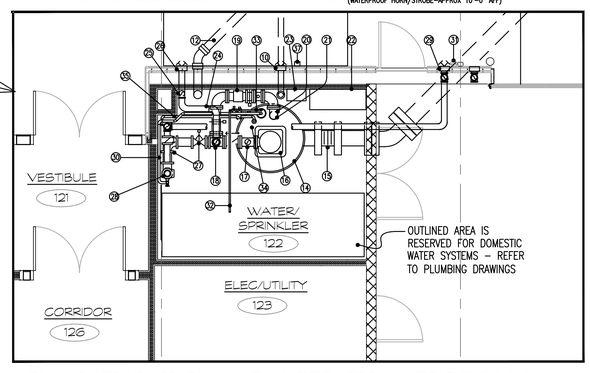
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2 / FP501



FIRE PROTECTION WATER SUPPLY PART PLAN

SCALE: 1/8" = 1'-0"



ENLARGED PART PLAN AT WATER/SPRINKLER ROOM 122

SCALE: 1/4" = 1'-0"

1 / FP501

NOTE: REFER TO DRAWINGS FP101 AND FP102 FOR BUILDING SPRINKLER SYSTEMS IN THESE AREAS

NUMBERED NOTES – FIRE PROTECTION WATER SUPPLY PART PLANS

1. 20,000 GALLON, 10 FT DIAMETER (NOM.) BURIED FRP SINGLE WALL FIRE PROTECTION WATER STORAGE TANK, 4 FT. COVER (MINIMUM)
2. 22"ø FLANGED TANK MANWAY/COVER
3. 42"ø WATERTIGHT TANK SUMP/COVER
4. 48"ø "FLOATING" COLLAR AND HEXABOLTED AND GASKETED DUCTILE IRON MANHOLE COVER (ALL H-20 LOADING)
5. 8"ø CONNECTION TO TOP OF TANK FOR VENT AND OVERFLOW
6. 8"ø TEE & OVERFLOW (DWV PVC) TO SITE STORM; REFER TO CIVIL DWGS FOR CONTINUATION
7. 12"ø WET PIT SUPPLY (AWWA C900, DR 25) WITH FLEXIBLE TANK CONN.
8. 4"ø CONNECTION TO TOP OF TANK FOR TANK FILL
9. 4"ø TANK FILL TO WALL-MOUNTED FILL CONN.; PITCH UP TO BUILDING
10. 4"ø WALL-MOUNTED TANK FILL AT 36" AFG, WITH (2) 2-1/2" NST INLETS WITH DROP CLAPPERS, CAPS, & CHAINS
11. 6"ø ELBOW & TANK VENT (PVC) BELOW GRADE; PITCH UP TO BUILDING
12. 6"ø TANK VENT (PVC) UP THRU MEZZ TO 6"VTR; REFER TO DETAIL 2/P501
13. 12"ø WET PIT SUPPLY (AWWA C900, DR 25) BELOW GRADE AND SLAB
14. 4'-0"ø X 18'-0" DEEP (INSIDE NOMINAL DIMENSIONS) FIBERGLASS VERTICAL PUMP VAULT (WET PIT)
15. 12"ø WET PIT SUPPLY (AWWA C900, DR 25) WITH FLEXIBLE PIT CONNECTION
16. VERTICAL TURBINE PUMP MOUNTED ON DUCTILE IRON PLATE SUPPORTED BY AND SECURED TO STRUCTURAL STEEL MOUNTED OVER WET PIT
17. 6" PUMP DISCHARGE TEE WITH 1-1/2" MIN AUTOMATIC AIR/VACUUM RELEASE VALVE
18. 6" TEE UP; PROVIDE STACKED 6" FLOW METER AND 4" TEST HEADER BRANCHES
19. 6" VENTURI FLOWMETER, WITH SUPERVISED CONTROL VALVE UPSTREAM, AND BUTTERFLY THROTTLING VALVE & AIR VENT DOWNSTREAM
20. ROUTE 6" FLOWMETER DISCHARGE TO AND THROUGH PIT COVER PLATE.
21. ROUTE 6" FLOWMETER DISCHARGE DN IN PIT ON PIT WALL TO OPEN JUST BELOW MINIMUM SUBMERGENCE LEVEL.
22. FLOOR-MOUNTED FIRE PUMP CONTROLLER & AUTOMATIC TRANSFER SWITCH; MAINTAIN REQUIRED CLEARANCES.
23. WALL-MOUNTED JOCKEY PUMP CONTROLLER; MAINTAIN REQUIRED CLEARANCES.
24. 4" FIRE PUMP TEST HEADER PIPING (HIGH)
25. DROP 4" TEST HEADER PIPING TO ROUTE THROUGH EXTERIOR WALL TO TEST HEADER.
26. WALL-MOUNT TYPE TEST HEADER AT 36" AFF: 4" INLET AND (2) 2-1/2" TEST GATES
27. 6" SUPERVISED CONTROL VALVE ON 6" FIRE PUMP DISCHARGE TO ALARM CHECK VALVE RISER
28. ALARM CHECK VALVE (ACV) & RISER (HYDRAULICALLY SIZE) REFER TO FP WATER SUPPLY SCHEMATIC, AND DRAWINGS FP101 AND FP102 FOR CONTINUATION.
29. WALL-MOUNTED FIRE DEPT. CONNECTION AT 36" AFF 4" FDC PIPING WITH CHECK VALVE/AUTO DRIP; CONNECT INTO ACV DISCHARGE (REFER TO WATER SUPPLY SCHEMATIC)
30. 2" MAIN TEST/DRAIN FROM ACV; PIPE BACK TO DISCHARGE INTO PIT; PROVIDE 6" DIA NOMINAL VAULT COVER PENETRATION, 8"DIA. X 6" HIGH BRONZE FUNNEL FITTING SECURED TO PENETRATION, CENTER 2" DRIP DISHARGE OVER FUNNEL AND PROVIDE AIR GAP. REFER TO NOTE 33 BELOW FOR ADDITIONAL DISCHARGE TO PIT.
31. ELECTRIC ALARM BELL ON EXTERIOR WALL, 10 FT AFF.
32. 3/4" DOMESTIC COLD WATER SUPPLY OVERHEAD; REFER TO PLUMBING DRAWINGS FOR CONTINUATION.
33. 3/4" MAKEUP TO WET PIT, WITH SUPERVISED MANUAL BALL VALVE, AND MOTORIZED CONTROL VALVE OPERATING THROUGH TANK/PIT WATER LEVEL MONITORING/CONTROL SYSTEM. MAKEUP SHALL BE THRU FUNNEL (SEE NOTE 30); COORDINATE WITH CENTERED 2" MAIN TEST/DRAIN DISCHARGE AND PROVIDE 2" AIR GAP.
34. SUBMERSIBLE JOCKEY PUMP IN PIT, WITH SUCTION LOCATED JUST BELOW FIRE PUMP'S MINIMUM SUBMERGENCE LEVEL.
35. JOCKEY PUMP DISCHARGE, WITH CHECK VALVE AND CONTROL VALVE; CONNECT INTO BASE OF ACV RISER, UPSTREAM OF SUPERVISED RISER CONTROL VALVE.
36. FIRE PROTECTION WATER TANK LEVEL MONITORING PANEL (NOT SHOWN) LOCATE IN DAY/RADIO ROOM 101, COORDINATED WITH ALL OTHER TRADES
37. EXTERIOR FIRE PROTECTION WATER TANK HIGH LEVEL ALARM (WATERPROOF HORN/STROBE–APPROX 10'–0" AFF)

FIRE PROTECTION DESIGN CRITERIA

NOTE: ALL SPRINKLER HEADS SHALL BE QUICK RESPONSE TYPE.

A BURIED FIRE PROTECTION WATER STORAGE TANK, WITH VERTICAL TURBINE FIRE PUMP, AND PUMP SUCTION VAULT ARE REQUIRED. WATER SUPPLY FROM THE LOCAL WATER UTILITY SHALL BE FOR LOW FLOW RATE TANK MAKEUP ONLY; MAKEUP SHALL BE METERED IF REQUIRED BY THE UTILITY. MINIMUM REQUIRED USEABLE FP WATER STORAGE SHALL BE (0.2 GPM/SF X 1500 SF X 60 MINUTES) 18,000 GALLONS. THE FIRE PUMP SHALL BE RATED FOR 500 GPM AT 250 FT TOTAL HEAD (MINIMUM). VERIFY FINAL BUILDING ELEVATIONS, REQUIRED SPRINKLER AND TANK ELEVATIONS AND REQUIRED VAULT DEPTH; AND USE FINAL DIMENSIONS TO CONFIRM PUMP RATING AND TO PERFORM ACCURATE HYDRAULIC CALCULATIONS FOR THE BUILDING'S SPRINKLER SYSTEMS.

WHERE DISTRIBUTION PIPING CAN BE RUN ON WARM SIDE OF BUILDING INSULATION, AND PROTECTED AREA IS NOT EXPOSED TO FREEZING:

OFFICES, MULTIPURPOSE MEETING ROOM, CONFERENCE, COPY AND WORK ROOMS, BUNK, LOCKER, TOILET, SHOWER, LAUNDRY AND DECON ROOMS, DAY ROOMS, VESTIBULES, LOBBIES AND CORRIDORS, ENGINEER, RADIO ROOM – INSTALL A HYDRAULICALLY BALANCED WET SPRINKLER SYSTEM TO PROVIDE A DENSITY OF 0.10 GPM PER SQUARE FOOT OVER THE MOST REMOTE 1500 SQUARE FOOT AREA WITH A 100 GPM ALLOWANCE FOR HOSE STREAMS. SPRINKLER HEAD SPACING 225 SQUARE FT. PER HEAD MAX. FOR UPRIGHT AND PENDENT SPRINKLER HEADS; PROVIDE RECESSED PENDENT IN FINISHED CEILINGS, UPRIGHT IN AREAS WITHOUT CEILINGS.

MECHANICAL, ELECTRICAL, SPRINKLER, WATER SERVICE, SCBA & AIR COMPRESSOR ROOMS, KITCHEN, RADIO, I.T. – INSTALL A HYDRAULICALLY BALANCED WET SPRINKLER SYSTEM TO PROVIDE A DENSITY OF 0.15 GPM PER SQUARE FOOT OVER THE MOST REMOTE AREA UP TO A MAXIMUM OF 1500 SQUARE FOOT AREA WITH A 250 GPM ALLOWANCE FOR HOSE STREAMS. SPRINKLER HEAD SPACING: 130 SQUARE FT. PER HEAD MAX. SPRINKLER HEADS; PROVIDE RECESSED PENDENT IN FINISHED CEILINGS, UPRIGHT IN AREAS WITHOUT CEILINGS.

STORAGE ROOMS AND AREAS, INCLUDING PANTRY, WORKSHOP/STORAGE, JANITOR'S CLOSETS, CLOSETS, COATS, RECORD AND FILE ROOMS – INSTALL A HYDRAULICALLY BALANCED WET SPRINKLER SYSTEM TO PROVIDE A DENSITY OF 0.20 GPM PER SQUARE FOOT OVER THE MOST REMOTE AREA UP TO A MAXIMUM OF 1500 SQUARE FOOT AREA WITH A 250 GPM ALLOWANCE FOR HOSE STREAMS. SPRINKLER HEAD SPACING: 130 SQUARE FT. PER HEAD MAX. SPRINKLER HEADS; PROVIDE RECESSED PENDENT IN FINISHED CEILINGS, UPRIGHT IN AREAS WITHOUT CEILINGS.

ATTICS OF NON– OR LIMITED–COMBUSTIBLE CONSTRUCTION, CONTAINING LITTLE OR NO MECHANICAL/ELECTRICAL EQUIPMENT; NO SPRINKLER PROTECTION IS REQUIRED.

ATTICS OF NON– OR LIMITED–COMBUSTIBLE CONSTRUCTION, CONTAINING SUBSTANTIAL AMOUNTS OF MECHANICAL/ELECTRICAL EQUIPMENT, AND APPARATUS BAYS, 3/12 SLOPED CLOS– INSTALL A HYDRAULICALLY BALANCED WET SPRINKLER SYSTEM TO PROVIDE A DENSITY OF 0.15 GPM PER SQUARE FOOT OVER THE MOST REMOTE 1950 SQUARE FOOT AREA (ROOF PITCH GREATER THAN 2" IN 12"), WITH A 250 GPM ALLOWANCE FOR HOSE STREAMS. SPRINKLER HEAD SPACING: 130 SQ. FT. PER HEAD. PROVIDE UPRIGHT SPRINKLERS.

WHERE DISTRIBUTION PIPING CANNOT BE RUN ON WARM SIDE OF BUILDING INSULATION, OR WHERE SPACE TO BE PROTECTED IS EXPOSED TO FREEZING:

PROVIDE DRY UPRIGHT, PENDENT OR SIDEWALL SPRINKLERS FED FROM WET PIPE SYSTEMS. REFER TO SPECIFICATIONS. ALL SPRINKLERS PROTECTING SPACES EXPOSED TO FREEZING SHALL BE DRY TYPE.

FIRE PROTECTION LEGEND
(NOT ALL SYMBOLS ARE USED)

SYMBOL	ABBREVIATION	DESCRIPTION
—— F ——	F	FIRE MAIN PIPING
—— SP ——	SP, SPK	WET PIPE SPRINKLER PIPING
—— DRY ——	DRY	DRY PIPE SPRINKLER PIPING
—— T/D ——	T/D	TEST/DRAIN PIPING
—— FDC ——	FDC	FIRE DEPARTMENT CONNECTION PIPING
—— DR ——	DR	DRAIN PIPING
—— FPTR ——	FPTR	FIRE PUMP TEST RETURN (FLOW METER BRANCH)
—— FPTH ——	FPTH	FIRE PUMP TEST HEADER PIPING
•		RECESSED PENDENT SPRINKLER HEAD (QUICK RESPONSE)
●		STANDARD PENDENT SPRINKLER HEAD (QUICK RESPONSE)
ⓒG		UPRIGHT SPRINKLER HEAD WITH WIRE GUARD, LEVEL INSTALLATION (QUICK RESPONSE)
ⓒ		UPRIGHT SPRINKLER HEAD (QUICK RESPONSE) LEVEL INSTALLATION
		UPRIGHT SPRINKLER HEAD (QUICK RESPONSE) PITCHED INSTALLATION (ALONG ROOF SLOPE)
▷		SIDEWALL SPRINKLER HEAD (QUICK RESPONSE) (NORMAL 14'x14' THROW)
D▷		DRY SIDEWALL SPRINKLER HEAD (QUICK RESPONSE) (NORMAL 14'x14' THROW)
PS	PS	PRESSURE SWITCH
LPS	LPS	LOW PRESSURE SWITCH
OS&Y	OSY W/TS	OUTSIDE SCREW & YOKE VALVE WITH TAMPER SWITCH
FS	FS	FLOW SWITCH
	CV	CHECK VALVE
		TEST & DRAIN VALVE
		PIPING DOWN
		PIPING UP
		PRESSURE GAUGE
A	ACV	ALARM CHECK VALVE ASSEMBLY
D	DPV	DRY PIPE VALVE ASSEMBLY
		ELECTRIC ALARM BELL
FM		FLOW METER
FDC	FDC	FIRE DEPARTMENT CONNECTION; REFER TO SPECS
FPTH	FPTH	FIRE PUMP TEST HEADER; REFER TO SPECS
	SP, SPK, SPKLR	SPRINKLER

FIRE PROTECTION NOTES

GENERAL SCOPE NOTE: FIRE PROTECTION CONTRACTOR'S WORK INCLUDES PROVISION OF UNDERGROUND FIRE PROTECTION WATER STORAGE TANK, ACCESSORIES AND PIPING (EXCEPT FOR OVERFLOW PIPING, ROUTE 5 FEET FROM TANK FOOTPRINT; SITE CONTRACTOR SHALL ROUTE OVERFLOW TO SITE STORM SYSTEMS); PREFABRICATED FIBERGLASS WET PIT WITH TANK/PIT WATER LEVEL MONITORING AND CONTROL SYSTEM; FIRE PUMP AND JOCKEY PUMP WITH ALL ACCESSORIES, FITTINGS AND CONTROLLER SYSTEMS, INCLUDING AUTOMATIC TRANSFER SWITCH; BUILDING AUTOMATIC SPRINKLER SYSTEM WITH RELATED TEST AND DRAIN PROVISIONS; FIRE PUMP FLOW METER AND TEST HEADER SYSTEMS AND PIPING, FIRE DEPARTMENT CONNECTION AND PIPING.; FURNISHING/INSTALLING ALL SYSTEM MONITORING AND ALARM DEVICES FOR WIRING BY THE PROJECT ELECTRICIAN.

1. INSTALL SPRINKLER SYSTEMS IN ACCORDANCE WITH MINIMUM STANDARDS OF NFPA 13, 2002. USE ONLY NEW APPROVED (UL/FM) SPRINKLERS, MATERIALS AND DEVICES. ADHERE TO NFPA 13 SPRINKLER SPACING RULES.
2. ALL SYSTEM COMPONENTS SHALL BE ABLE TO WITHSTAND A WORKING PRESSURE OF 175 PSI.
3. SUPPORT SPRINKLER PIPING IN A SUBSTANTIAL MANNER FROM BUILDING STRUCTURE, AND INDEPENDENT OF THE CEILING MATERIAL. DO NOT USE SPRINKLER PIPING OR HANGERS TO SUPPORT NON–SYSTEM COMPONENTS.
4. MAKE REDUCTIONS IN PIPE SIZES WITH ONE–PIECE REDUCING FITTINGS. DO NOT USE BUSHINGS.
5. PROVIDE CLEARANCE AROUND ALL PIPING EXTENDING THROUGH WALLS, FLOORS, PLATFORMS AND FOUNDATIONS.
6. ARRANGE PIPING TO FACILITATE FLUSHING. PROVIDE READILY REMOVABLE FITTINGS AT ENDS OF ALL CROSS AND FEED MAINS.
7. INSTALL ALL PIPING WITH PROVISIONS FOR COMPLETE DRAINAGE. WET–PIPE SPRINKLER SYSTEMS MAY BE INSTALLED LEVEL, AND NOT SLOPED. DRY PIPE SYSTEMS SHALL BE PITCHED PER NFPA 13.
8. DO NOT SCALE DRAWINGS. CHECK SPACE CONDITIONS AT THE JOB SITE.
9. SECURE AND PAY COSTS OF PERMITS, CERTIFICATES, LICENSES, FLOW TESTS, INSPECTIONS AND APPROVALS.
10. REFER TO SPECIFICATION DIVISION 21 SECTIONS FOR SUBMITTAL REQUIREMENTS. PROVIDE COMPLETE PRODUCT, SHOP DRAWING AND HYDRAULIC CALCULATIONS TO (AND DO NOT PROCEED WITH INSTALLATION PRIOR TO RECEIVING WRITTEN APPROVAL FROM) THE ENGINEER, FIRE MARSHAL AND OWNER'S FIRE INSURANCE UNDERWRITER.
11. PROVIDE INSPECTOR'S TEST CONNECTION FOR WET SPRINKLER SYSTEM. PROVIDE INDIVIDUAL INSPECTOR'S TEST CONNECTION FOR EACH SEPARATELY–MONITORED SPRINKLER ZONE (IF DESIGNED). INSPECTOR'S TEST VALVES SHALL BE EASILY ACCESSIBLE IN SECURE AREAS, PREFERRABLY WITHIN 7 FEET OF THE FLOOR. IF LOCATED IN FINISHED AREA, CONCEAL TEST PIPING DISCHARGE FROM VIEW WHEREVER POSSIBLE.
12. INSTALL SPRINKLERS BENEATH DUCTS AND OTHER OBSTRUCTIONS TO SPRINKLER DISCHARGE WHICH ARE MORE THAN 4 FEET WIDE.
13. SPRINKLERS SHALL BE PROVIDED ABOVE AND BENEATH OPEN LEVEL OF ALL OVERHEAD DOORS WHICH PRESENT AN OBSTRUCTION TO CEILING SPRINKLER DISCHARGE WHEN DOOR IS OPEN.
14. PROVIDE ALL CONTROL, DRAIN AND TEST VALVES WITH IDENTIFICATION SIGNS AND SUPERVISORY SWITCHES.
15. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL SPRINKLER HEADS, DIFFUSERS, LIGHTS, GRILLES, ETC.
16. ALL PIPING SHALL BE SUPPORTED FROM THE STRUCTURAL MEMBERS PER THE REQUIREMENTS OF THE STRUCTURAL ENGINEER. ENSURE BY COORDINATION WITH THE STRUCTURAL ENGINEER THAT NFPA 13, CHAPTER 9 REQUIREMENTS FOR STRUCTURAL SUPPORT (INCLUDING ADDITIONAL SAFETY LOAD OF 250 LBS AT EACH POINT OF PIPING SUPPORT) ARE ACCOMMODATED IN THE STRUCTURAL DESIGN.

SPRINKLER SYSTEM NOTES

1. CONTRACTOR SHALL PROVIDE, AND RUN PIPING TO, ALL SPRINKLER HEADS, COORDINATE EXACT LOCATION OF PIPING, SIZE ALL PIPING, COORDINATE WITH OTHER TRADES, PRODUCE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS AS LISTED THROUGHOUT.
2. THE CONTRACTOR SHALL NOT REVISE OR DEVIATE FROM THE MAIN PIPING LAYOUT, VALVES, EQUIPMENT, ACCESSORIES, DEVICES OR SPRINKLER HEADS SHOWN ON THESE DRAWINGS AND ITEMS LISTED IN THE SPECIFICATIONS UNLESS APPROVED THROUGH THE FORMAL SUBMITTAL PROCESS.
3. ANY SPRINKLER HEAD LAYOUT INDICATED ON THE PLANS IS SHOWN ONLY FOR GENERAL REFERENCE AND COORDINATION WITH OTHER TRADES. DO NOT COUNT THE SPRINKLER HEADS INDICATED FOR BIDDING PURPOSES. THE ACTUAL NUMBER OF SPRINKLERS REQUIRED SHALL BE BASED ON FINAL COORDINATED SPRINKLER SHOP DRAWINGS.
4. PROVIDE AND INSTALL WHETHER SHOWN OR NOT, INSIDE THE BUILDING, A 1" INSPECTORS TEST CONNECTION, INCLUDING A 1" SHUTOFF VALVE AND SIGHT GLASS, FOR THE WET SPRINKLER SYSTEM.
5. IF MORE THAN ONE SPRINKLER ZONE IS DESIGNED, PROVIDE AND INSTALL WHETHER SHOWN OR NOT, INSIDE THE BUILDING, A 1" INSPECTORS TEST CONNECTION, INCLUDING A 1" SHUTOFF VALVE AND SIGHT GLASS, FOR EACH SPRINKLER ZONE.
6. FURNISH AND INSTALL, WHERE DIRECTED BY THE OWNER, A SPARE HEAD CABINET INCLUDING A WRENCH AND SPRINKLER HEAD SPARES OF ALL TYPES, DEGREE RATING AND ORIFICE SIZES INSTALLED.
7. BEFORE ACTUAL INSTALLATION, THIS CONTRACTOR SHALL PREPARE AND SUBMIT ACTUAL DETAILED WORKING DRAWINGS TO THE ENGINEER, THE NORTH STONINGTON FIRE MARSHAL, AND THE OWNER'S INSURANCE UNDERWRITER TO OBTAIN STAMPED FINAL APPROVAL.
8. A STANDARD INSTALLATION OF AUTOMATIC SPRINKLERS ARRANGED AS A WET PIPE SYSTEM IS REQUIRED. THE SPRINKLER CONTRACTOR SHALL HYDRAULICALLY DESIGN THE SPRINKLER SYSTEM STARTING AT THE DISCHARGE OF THE FIRE PUMP PACKAGE. THE SYSTEM SHALL BE DESIGNED TO PROVIDE DENSITIES AS NOTED OVER THE HYDRAULICALLY MOST REMOTE AREA(S) SERVED BY THAT SYSTEM (PERFORM ONE REMOTE AREA CALCULATION FOR EACH BUILDING OCCUPANCY CLASSIFICATION TO ENSURE THE MOST CHALLENGING HYDRAULIC DEMAND HAS BEEN MET). ALLOWANCE FOR INSIDE AND OUTSIDE HOSE SHALL BE INCLUDED ONLY FOR EVALUATION OF WATER SUPPLY, NOT FOR SIZING FIRE PUMP.
9. AT ALARM CHECK VALVE, HAND HYDRAULIC CALCULATION POSTER SIGN EQUAL TO "ViKING" #03573C, SUMMARIZING THE MOST CHALLENGING HYDRAULICALLY CALCULATED DEMAND.
10. CAUTION SIGNS SHALL BE ATTACHED TO ALL CONTROLLING SPRINKLER VALVES AS PER NFPA 13.
11. WHERE PIPING IS TO BE RUN THROUGH EXPANSION JOINTS, CONTRACTOR SHALL INSTALL EXPANSION LOOPS AT THAT POINT.
12. ALL NORMALLY DRY PIPING SHALL BE GALVANIZED STEEL SCHEDULE 40; THIS INCLUDES FIRE DEPARTMENT CONNECTION PIPING FROM CHECK VALVE TO FDC, AND TEST AND/OR DRAIN PIPING.
13. SPRINKLER FEED MAINS AND SP ZONE PIPE SIZES SHALL BE DETERMINED FROM FIRE PROTECTION CONTRACTOR SHOP DRAWINGS AND HYDRAULIC CALCULATIONS.
14. REFER TO SPECIFICATION DIVISION 21 SECTIONS FOR SUBMITTAL REQUIREMENTS. PROVIDE COMPLETE PRODUCT DATA, SPRINKLER SHOP DRAWINGS AND HYDRAULIC CALCULATIONS TO, AND DO NOT PROCEED WITH INSTALLATION PRIOR TO RECEIVING WRITTEN APPROVAL FROM THE ENGINEER, FIRE MARSHAL AND OWNER'S FIRE INSURANCE UNDERWRITER.
15. ALL PIPING PENETRATIONS THROUGH RATED WALLS SHALL BE SEALED WITH LISTED FIREPROOFING MATERIALS. SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF RATED WALLS, AND SPEC SECTION 078413 "PENETRATION FIRESTOPPING".
16. PROVIDE SEISMIC SUPPORTS PER REQUIREMENTS OF THE STATE OF CONNECTICUT BUILDING CODE. REFER TO STRUCTURAL DRAWINGS FOR PROJECT–SPECIFIC SEISMIC DESIGN CONDITIONS AND CRITERIA.
17. IN AREAS WITH CEILINGS, ALL PIPING IS TO BE RUN CONCEALED ABOVE CEILINGS. PIPING IS TO BE EXPOSED ONLY WHERE CEILINGS ARE NOT PROVIDED. IF CONTRACTOR CANNOT RUN PIPING CONCEALED, NOTIFY ENGINEER IMMEDIATELY TO RESOLVE CONFLICT.
18. IN SMALL ROOMS OR CLOSETS WHERE SURFACE MOUNTED LIGHTS OR OTHER OBSTRUCTIONS EXIST, THE CONTRACTOR SHALL INSTALL STANDARD PENDENT HEADS WITH DEFLECTOR BELOW THE LEVEL OF THE OBSTRUCTION, OR MAINTAIN REQUIRED CLEARANCE FROM THE OBSTRUCTION, PER OBSTRUCTION DEPTH, ACCORDING TO RULES SET BY NFPA 13. DEEP CHROME ESCUTCHEONS MAY BE USED IF ABSOLUTELY NECESSARY. THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY IF THESE ESCUTCHEONS ARE REQUIRED DUE TO THE CONCERN OF AESTHETICS OF THE SPRINKLER SYSTEM. SEE NFPA 13 FOR OBSTRUCTION CLEARANCE RULES.
19. PIPING MAINS ARE SHOWN ONLY TO CLARIFY WHERE THE ENGINEER INTENDS THE PIPING TO BE LOCATED. THE CONTRACTOR SHALL NOT DEVIATE FROM THE LOCATIONS SHOWN UNLESS IT IS PHYSICALLY IMPOSSIBLE TO INSTALL PIPING IN THOSE LOCATIONS. SPRINKLER CONTRACTOR SHALL RUN ALL OTHER REQUIRED PIPING TO SPRINKLER HEADS, TEST, DRAINS, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELBOWS, TEES, DROPS, AND MISCELLANEOUS PIPING REQUIRED DUE TO ELEVATION CHANGES, OBSTRUCTIONS, ETC. TO INSTALL A COMPLETE AND FULLY FUNCTIONAL SPRINKLER SYSTEM.
20. AT ALL LOCATIONS WHERE PIPING IS ATTACHED TO BEAMS, A GALVANIZED BEAM RESTRAINING STRAP MUST BE USED IN CONJUNCTION WITH GALVANIZED BEAM CLAMP.
21. CONCEALED SPACES ENCLOSED IN COMBUSTIBLE CONSTRUCTION, IN ADDITION TO ANY CONCEALED COMBUSTIBLE SPACES INDICATED ON THE DRAWINGS TO BE SPRINKLERED, MAY BE CREATED AS PART OF THE NEW CONSTRUCTION. IDENTIFY LOCATIONS OF SUCH SPACES AND PROVIDE SPRINKLER PROTECTION PER NFPA 13 FOR SAME.

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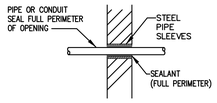
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Drawing Title:
FIRE PROTECTION
LEGENDS, NOTES AND DETAILS

100% CD Submission

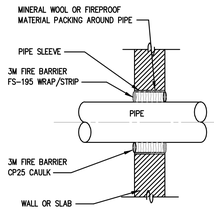
Date: 12/1/16
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Drawn By: MBQ
Project Number: 13.220
Drawing Number: FP501



WALL PENETRATIONS AT NON-RATED WALLS

SCALE: NONE

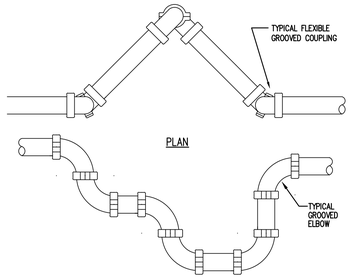
FOR WALL PENETRATIONS AT RATED WALLS, SEE SPECIFICATION SECTION "FIRESTOPPING"



DETAIL OF FIREPROOFING OF PIPES PENETRATING WALLS, SLABS, SHAFT WALLS

9 / FP502

SCALE: NONE

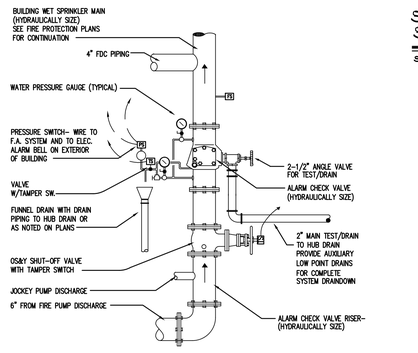


PROVIDE SEISMIC SEPARATION ASSEMBLIES WITH FLEXIBLE COUPLINGS WHERE ANY FIRE PROTECTION PIPING CROSSES SEISMIC SEPARATION JOINTS ABOVE GROUND LEVEL (PER NFPA 13 REQUIREMENTS). CALCULATE & DESIGN ASSEMBLIES TO PROVIDE FOR THE DIFFERENTIAL MOTIONS DURING EARTHQUAKES.

GROOVED SEISMIC SEPARATION ASSEMBLY

6 / FP502

SCALE: NONE



NOTE:

ALL EQUIPMENT, PIPING, VALVES, SUPERVISORY AND ALARM DEVICES, ETC. SHALL BE PROVIDED BY THE SPRINKLER CONTRACTOR UNLESS OTHERWISE NOTED.

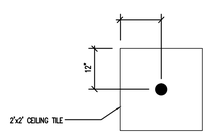
WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR.

NOT ALL TRIM IS SHOWN. PROVIDE ALL TRIM, SUPPORT EQUIPMENT, ETC. REQUIRED FOR A COMPLETE AND CORRECTLY FUNCTIONING INSTALLATION PER NFPA 13 AND MFR'S INSTALLATION INSTRUCTIONS.

DETAIL OF WET PIPE RISER AND ALARM CHECK VALVE ASSEMBLY

5 / FP502

SCALE: NONE

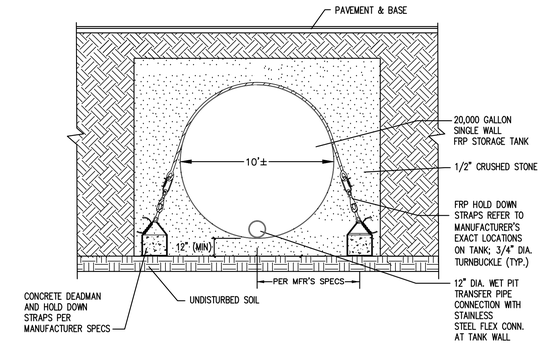


NOTE: LOCATION OF SPRINKLER HEAD IN GRID SHALL BE TYPICAL EXCEPT WHERE SPECIFICALLY DIMENSIONED OTHERWISE ON PLANS

TYPICAL SPRINKLER HEAD LOCATION IN CEILING TILE GRID

8 / FP502

SCALE: NONE



SECTION A-A SINGLE-WALL UNDERGROUND STORAGE TANK

3 / FP502

SCALE: NONE

FIRE PROTECTION WATER STORAGE REQUIREMENTS

MINIMUM AMOUNT OF WATER REQUIRED TO BE STORED AND USEABLE FOR FIRE PROTECTION:

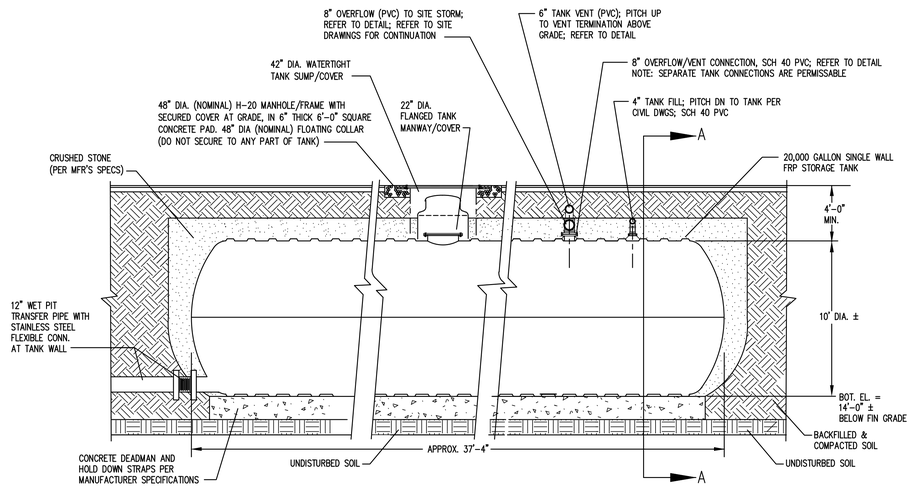
MOST DEMANDING OCCUPANCY HAZARD: ORDINARY HAZARD – GROUP 2 OCCUPANCIES AREAS ARE LIMITED; APPARATUS BAYS ARE ORDINARY HAZARD–GROUP 1 OVER 1950 SF (ADJUSTED FOR ROOF PITCH GREATER THAN 2/12); REQUIRED SPRINKLER WATER SUPPLY (015 gpm/sf X 1950 sf) = 292.5 GPM: REQUIRED DURATION OF WATER SUPPLY: 60 MINUTES (WITH REMOTE MONITORING OF FIRE ALARM SYSTEM). TOTAL STORED GALLONAGE REQUIRED FOR BUILDING FIRE PROTECTION SYSTEMS: 292.5 X 60 = 17,550 GALLONS

USEABLE WATER IN TANK (BASED ON CONTAINMENT SOLUTIONS, INC. 20,000 GALLON 10 FT DIAMETER SWT MODEL):

GROSS VOLUME: 19,951 GALLONS; LESS NON-USEABLE BELOW FIRE PUMP SUCTION ELEVATION [BOTTOM 6" OF TANK] (317 GALLONS), AND VOLUME ABOVE FILL SHUT-OFF SETTING [TOP 12" OF TANK] (951 GALLONS)

NET AVAILABLE TANK WATER VOLUME FOR FIRE PROTECTION: 18,683 GALLONS

NOTE: ADDITIONAL WATER IS AVAILABLE FOR PUMP SUCTION IN WET PIT: APPROXIMATELY 550 GALLONS



ELEVATION SINGLE-WALL UNDERGROUND STORAGE TANK

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SCALE: NONE

NOTES:

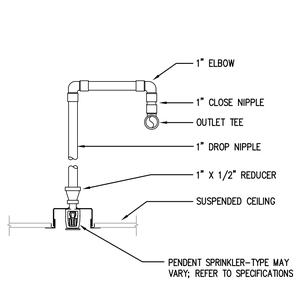
PROVIDE STAINLESS STEEL CONNECTIONS ON WET PIT SUPPLY PIPE AT TANK AND WET PIT PER TANK/PIT MANUFACTURER'S REQUIREMENTS.

ALL EXPOSED (ABOVE GRADE) PLASTIC PIPE SHALL BE PAINTED (RED) FOR PROTECTION FROM SUNLIGHT.

SCHEMATIC PLAN VIEW SINGLE-WALL UNDERGROUND STORAGE TANK

1 / FP502

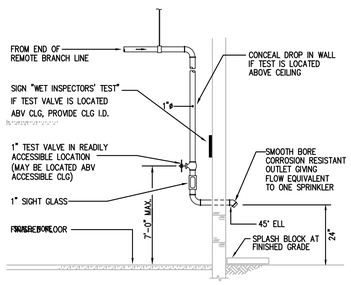
SCALE: NONE



DETAIL OF SPRINKLER CONNECTION FOR CENTER OF TILE INSTALLATION

7 / FP502

SCALE: NONE



DETAIL OF WET PIPE INSPECTOR'S TEST CONNECTION

4 / FP502

SCALE: NONE

FIRE PROTECTION STORAGE TANK/WET PIT WATER LEVEL MONITORING AND ALARM

FOR THE EXTERIOR UNDERGROUND FIRE PROTECTION WATER STORAGE TANK, PROVIDE A LIQUID LEVEL MONITORING AND ALARM SYSTEM, ATLANTIC AMERICAN FIRE EQUIPMENT COMPANY, SPECIAL HAZARDS GROUP MODEL NUMBER AAWL005.

SYSTEM SHALL BE CAPABLE OF CONTROLLING AND INDICATING STATUS OF AUTOMATIC FILL (MAKEUP) AND OF ALARMING CRITICALLY HIGH AND LOW LEVELS.

SYSTEM SENSORS SHALL BE LOCATED IN THE PUMP VAULT, AS BOTH TANK AND VAULT ARE ATMOSPHERICALLY VENTED AND WILL HAVE THE SAME WATER LEVEL.

SYSTEM PANEL SHALL BE LOCATED IN DAY/RADIO ROOM 101, APPROXIMATELY WHERE INDICATED ON PLANS, EXACT LOCATION COORDINATED WITH ALL OTHER TRADES.

SYSTEM REMOTE HORN/STROBE SHALL BE MOUNTED ON EXTERIOR WALL NEAR TANK FILL TO ALERT TANKER TRUCK OPERATOR TO HIGH WATER.
REMOTE HORN/STROBE: SIEMENS MODEL # MTH-HMC-R-WP, RED FINISH, WITH HORN AND MULTI-CANDELA LIGHT, OR APPROVED EQUAL BY SYSTEM MFR.

SYSTEM SHALL BE PROVIDED BY THE FIRE PROTECTION CONTRACTOR, AND WIRED BY THE ELECTRICAL CONTRACTOR.

SYSTEM INDICATION/ANNUNCIATION/CONTROL SHALL INCLUDE:
AT OVERFLOW LEVEL, HIGH WATER BUZZER AND EXTERIOR HORN/STROBE CONTINUE TO ANNUNCIATE, AND "TROUBLE" SIGNAL IS SENT TO F.A. SYSTEM.
AT DESIGN HIGH WATER LEVEL, BUZZER SOUNDS ON PANEL, AND A HORN/STROBE PROVIDED BY CONTRACTOR ON EXTERIOR WALL IN CLOSE PROXIMITY TO EXTERIOR TANK FILL SHALL ACTIVATE.
AT AUTO FILL VALVE 'OFF' LEVEL, FILL VALVE CLOSED, AND LIGHT ON PANEL INDICATES "NORMAL OPERATION"
AT AUTO FILL VALVE 'ON' LEVEL, FILL VALVE OPENS AND BUZZER SOUNDS ON PANEL
AT LOW WATER LEVEL, BUZZER SOUNDS ON PANEL, AND "TROUBLE" SIGNAL IS SENT TO F.A. SYSTEM.

NOTE: COORDINATE ALL REQ'D POWER/ALARM/CONTROL/RELAY WIRING WITH ELECTRICAL CONTRACTOR.

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

SILVER / PETRUCELLI + ASSOCIATES
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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
FIRE PROTECTION DETAILS

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: MBQ
Project Number: 13.220

Drawing Number: FP502

PLUMBING GENERAL NOTES

GENERAL

THE INTENT OF THESE CONTRACT DOCUMENTS (SPECIFICATIONS AND DRAWINGS) IS FOR THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE PLUMBING SYSTEMS. ALL SYSTEMS SHALL BE COMPLETE IN ALL RESPECTS. OPERATING, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.

WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR, THE MORE STRINGENT, AND/OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITHIN NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.

ITEMS AND SERVICES NOT SHOWN ON DRAWINGS OR SPECIFICATIONS BUT REQUIRED TO RENDER THE WORK COMPLETE AND READY FOR OPERATION, SHALL BE PROVIDED WITHOUT ADDITIONAL COST.

WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK AS SPECIFIED AND AS REQUIRED BY JOB CONDITIONS. WHERE A CONFLICT EXISTS BETWEEN THESE NOTES, THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

DRAWINGS ARE DIAGRAMMATIC AND INDICATE A GENERAL ARRANGEMENT OF WORK AND ARE NOT TO BE CONSIDERED SUB-CONTRACTOR DOCUMENTS. IT IS THE INTENT OF THESE DOCUMENTS TO INCLUDE THE PROVISION AND INSTALLATION OF ALL NECESSARY WORK AND MATERIALS FOR COMPLETE, OPERATIONAL AND CODE COMPLIANT SYSTEMS BY THE CONTRACTOR. GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED. THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING, VALVES AND EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION. DO NOT SCALE DRAWINGS. CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL REQUIREMENTS.

PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT GENERAL CONDITIONS AND WITH THE PROVISIONS OF ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND LAWS.

WORK SHALL INCLUDE ALL INCIDENTALS, LABOR, MATERIAL, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS, FEES, LICENSES, AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE WORK SHOWN ON THE DRAWINGS, SPECIFIED HEREIN AND AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM..

ALL EQUIPMENT, MATERIALS AND RELATED SYSTEMS COMPONENTS SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.

STORE MATERIALS INSIDE AND PROTECTED FROM DEBRIS, WEATHER AND MOISTURE.

THIS CONTRACTOR SHALL COORDINATE ALL POWER AND CONTROL WIRING REQUIRED FOR EQUIPMENT OPERATION REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM WITH ELECTRICAL CONTRACTOR. THIS CONTRACTOR SHALL PROVIDE MOTOR STARTERS FOR INSTALLATION. COORDINATE REQUIREMENTS.

PROVIDE AND INSTALL ALL MAKE-UP WATER DISTRIBUTION TO HVAC EQUIPMENT INCLUDING BACKFLOW PREVENTER.

PROVIDE AND INSTALL INDIRECT CONDENSATE WASTE PIPING AND TRAP TO FLOOR DRAIN OR DRAIN RECEPTOR FROM ALL HVAC EQUIPMENT. PROVIDE ADDITIONAL FLOOR DRAINS WITH TRAP PRIMERS OR DRAIN RECEPTORS AS REQUIRED.

PLUMBING DEVICES, FAUCETS, VALVES AND FITTINGS REQUIRED FOR SPECIALTY SERVICE EQUIPMENT (IE. KITCHEN, LAB,ETC) SHALL BE PROVIDED BY THIS CONTRACTOR UNLESS OTHERWISE SPECIFIED. THIS CONTRACTOR SHALL PROVIDE AND INSTALL PIPING, CONNECTIONS, DEVICES, VALVES AND EQUIPMENT REQUIRED FOR PROPER OPERATION. COORDINATE REQUIREMENTS.

KITCHENS, LABS AND SIMILAR SPECIALTY AREAS: ALL EXPOSED PIPING, STOPS, COCKS, AND WASTES WHICH ARE VISIBLE SHALL BE CHROME PLATED.

REPAIR AND/OR REPLACE AT NO COST TO OWNER ALL EQUIPMENT AND MATERIALS DAMAGED DURING CONSTRUCTION.

COORDINATION

THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS, INCLUDING PROJECT MANUAL, PLANS AND SPECIFICATIONS OF ALL TRADES BEFORE SUBMITTING BID. REFER TO SPECIFICATIONS, PROJECT MANUAL AND PLANS, INCLUDING ALL EQUIPMENT SCHEDULES FOR INFORMATION. CONTRACTOR SHALL WALK THROUGH BUILDING PRIOR TO SUBMITTING BID WHEN AVAILABLE.

ALL OF THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY TO FORM A TOTAL DESIGN PACKAGE. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER TO DETERMINE WHICH TRADE CONTRACTOR IS RESPONSIBLE FOR VARIOUS PORTIONS OF THE WORK.

ALL WORK AND ACTION DEPICTED AND DESCRIBED SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.

THE PLUMBING CONTRACTOR SHALL VERIFY THESE DRAWINGS WITH EXISTING FIELD CONDITIONS AND SHALL COORDINATE WITH CIVIL ENGINEER LOCATIONS AND ELEVATIONS OF PLUMBING SERVICE LINES BEFORE PROCEEDING WITH CONSTRUCTION. THE UTILITY SERVICE LINES SHOWN ON THE DRAWINGS ARE FOR REFERENCE & BUILDING PERMIT ONLY. REFER TO CIVIL ENGINEERS DRAWINGS FOR UTILITY SERVICE LINES LAY-OUT & DETAILS.

CONTRACTORS SHALL COORDINATE THEIR WORK WITH ALL OWNER-FURNISHED EQUIPMENT, INCLUDING REQUIRED SERVICE CONNECTIONS, RECEPTACLES, ETC. BEFORE INSTALLATION.

THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF EQUIPMENT WITH ALL TRADES BEFORE STARTING CONSTRUCTION. ANY MODIFICATIONS TO THE EQUIPMENT LAYOUT REQUIRED FOR INSTALLATION ARE TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. COORDINATE ALL PIPING AND CONDUITS LEAVING THE BUILDING WITH THE SITE CONTRACTOR BEFORE INSTALLATION.
LOCATION AND SIZES OF ALL FLOOR, WALL AND ROOF PENETRATIONS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.

DEVELOP AND SUBMIT COORDINATION DRAWINGS AS OUTLINED.

SHEET METAL, PLUMBING AND FIRE PROTECTION SHOP DRAWINGS THAT HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER "REVIEWED" OR "FURNISH AS CORRECTED" PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS.

AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVISED PER ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THEIR WORK:

-MECHANICAL SHEET METAL
-PLUMBING PIPING
-MECHANICAL PIPING
-SPRINKLER PIPING
-ELECTRICAL WORK

AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWING AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWING IS RESPONSIBILITY OF OMITTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.

THE ARCHITECT AND ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE FOR NOTED CONFLICTS ONLY. COORDINATION DRAWINGS ARE NOT TO BE CONSIDERED PIPING OR DUCT SHOP DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT INDIVIDUAL PIPING AND DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. PIPING AND DUCTWORK SHOP DRAWINGS SHALL FOLLOW THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.

SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW COORDINATION DRAWINGS FOR GENERAL ARRANGEMENT AND FOR NOTED CONFLICTS ONLY. SPECIFIC INSTALLATION REQUIREMENTS WILL BE REVIEWED ONLY IN INDIVIDUAL TRADE SHOP DRAWINGS.

ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES WHICH IS DEEMED TO BE IN CONFLICT WITH COORDINATION DRAWINGS SHALL BE REMOVED AND RE-INSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.

EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.

THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR CLEARLY IDENTIFIED CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

SHOP DRAWINGS

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO BE APPROVED, REVISED, OR RESUBMITTED AS PER THE ENGINEERS COMMENTS, PRIOR TO CONSTRUCTION. INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

-PLUMBING FIXTURES	-CLEAN OUTS	-DRAINS
-PIPING	-PIPE SEALS	-COMPRESSORS
-FITTINGS	-BRAZING	-HANGERS/SUPPORTS
-INSULATION	-EXPANSION TANKS	-WATER HEATERS
-PUMPS	-VALVES	-THERMOSTATIC MIXING VALVES

AS BUILT DRAWINGS

PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSECUTIVE SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPERWORK WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COMPLY WITH THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND CONCISE SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED IN BOTH HARD COPY AND ELECTRONIC (AUTO-CAD VERSION AS REQUIRED BY THE OWNER) VERSION. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.

PROVIDE "AS-BUILT DRAWINGS" INDICATING IN A NEAT AND ACCURATE MANNER A COMPLETE RECORD OF ALL REVISIONS OF THE ORIGINAL DESIGN OF THE WORK. INDICATE THE FOLLOWING INSTALLED CONDITIONS:

INCLUDE ALL CHANGES AND AN ACCURATE RECORD, ON REPRODUCTIONS OF THE CONTRACT DRAWINGS OR APPROPRIATE SHOP DRAWINGS, OF ALL DEVIATIONS, BETWEEN THE WORK SHOWN AND WORK INSTALLED.

MAINS AND BRANCHES OF PIPING SYSTEMS, WITH VALVES AND CONTROL DEVICES LOCATED AND NUMBERED, CONCEALED UNIONS LOCATED, AND WITH ITEMS REQUIRING MAINTENANCE LOCATED (I.E., TRAPS, STRAINERS, EXPANSION COMPENSATORS, TANKS, ETC.). VALVE LOCATION DIAGRAMS, COMPLETE WITH VALVE TAG CHART.
EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM PROMINENT BUILDING LINES.

APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

CONTRACT MODIFICATIONS, ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

SUBMIT FOR REVIEW BOUND SETS OF THE REQUIRED DRAWINGS, MANUALS AND OPERATING INSTRUCTIONS.

SUBMIT A COMPLETE MAINTENANCE MANUAL OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.

HOUSEKEEPING PADS

PROVIDE CONCRETE HOUSEKEEPING PADS FOR FLOOR-MOUNTED EQUIPMENT. COORDINATE EXACT LOCATIONS, DIMENSIONS, PIPING LOCATIONS, AND ANCHOR BOLT REQUIREMENTS. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT. PADS SHALL BE CONSTRUCTED OF 3,000 PSI CONCRETE. PADS SHALL BE 4 INCHES HIGH, AND 4 INCHES WIDER THAN THE EQUIPMENT IN BOTH DIRECTIONS.

COORDINATE FLOOR DRAIN LOCATIONS WITH RESPECT TO EQUIPMENT HOUSEKEEPING PADS. PLACE DRAINS SUCH THAT EDGE OF THE FLOOR GRATE EXTENDS NO FURTHER THAN 2 INCHES FROM THE SIDE OF THE PAD.

HANGERS AND SUPPORT

SEISMIC RESTRAINT: PROVIDE SEISMIC RESTRAINT AND EXPANSION OF ALL PLUMBING EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH STATE AND FEDERAL BUILDING CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT INDICATING ALL NECESSARY COMPONENT CUTS, PLAN LOCATIONS AND CALCULATIONS FOR A COMPLETE SYSTEM.

PROVIDE ALL NECESSARY STRUCTURAL MEMBERS INCLUDING ADDITIONAL STRUCTURAL SUPPORT TO SUPPORT PIPING AND EQUIPMENT. HANGERS AND SUPPORTS SHALL BE OF AN APPROVED DESIGN NECESSARY TO SUPPORT PIPING, EQUIPMENT AND TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC., ARE SUPPORTED FROM CONCRETE CONSTRUCTION, DO NOT WEAKEN CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION. ALL SUCH HANGERS SHALL BE FINALLY ADJUSTED BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION, AS REQUIRED. HANGERS IN CONTACT WITH COPPER OR BRASS PIPE SHALL BE DIELECTRIC, COMPATIBLE WITH COPPER AND BRASS ALLOY OR PROVIDED WITH FELT SLEEVE.

PROVIDE ADDITIONAL SUPPORT FOR PIPING AND EQUIPMENT WHEN DECK IS NOT CAPABLE OF SUPPORT.

BEAM CLAMPS - HANGERS SUPPORTED FROM STEEL SHALL BE CENTER LOADING BEAM CLAMPS FOR HANGERS SUPPORTING PIPING 2 INCHES. FOR PIPING 2-L/2 INCHES AND LARGER, I BEAM CLAMPS SHALL BE FORGED STEEL. "C" CLAMPS ARE NOT TO BE USED.

PROVIDE AND INSTALL EXPANSION COMPENSATION FOR ALL PIPING. SUBMIT PLANS, CALCULATIONS AND EQUIPMENT DATA.

BAND IRON, TIE WIRE, METAL STRAPPING OR WIRE STRAPPING SHALL NOT BE PERMITTED TO SUPPORT PIPING OR EQUIPMENT.

PIPE SEALS

SEAL ALL PIPING PASSING THROUGH ALL FIRE AND/OR SMOKE RATED PARTITIONS AND WALLS WITH A UL LISTED, APPROVED AND TESTED FIRE AND/OR SMOKE SEALING MATERIAL INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

ALL PIPING PENETRATING A SLAB ON GRADE OR FOUNDATION WALL BELOW GRADE AND IN CONTACT WITH EARTH SHALL BE PROVIDED WITH A POURED IN PLACE SCHEDULE 80 GALVANIZED STEEL WATER TIGHT SLEEVE WITH INTEGRAL WATER STOP AND SEAL EQUAL TO "LINK SEAL".

FURNISH AND SET STEEL PIPE SLEEVES OF SCHEDULE 40 BLACK STEEL FOR ALL LOCATIONS OF INTERIOR PARTITIONS, WALLS AND FLOORS PROVIDING AT LEAST 1/2" CLEARANCE BETWEEN PIPE INSULATION AND SLEEVE OR PIPE AND SLEEVE. WALL SLEEVES SHALL BE SMOOTH CUT AND SET FLUSH WITH FINISHED WALLS. FLOOR SLEEVES SHALL EXTENDED 2" ABOVE THE FINISHED FLOOR.

ALL PIPING THROUGH WALLS, FLOORS OR CEILINGS SHALL HAVE SLEEVES AND ESCUTCHEONS. PROVIDE A TWO PIECE CHROME ESCUTCHEON WHERE PIPING PASSES THROUGH WALLS OR FLOORS OF FINISHED SPACES.

PLUMBING FIXTURES

PLUMBING FIXTURES SHALL BE NEW, COMPLETE WITH TRIMMINGS AND FITTINGS, INCLUDING FAUCETS, CARRIERS, SUPPLIES, STOPS, TRAPS, TAILPIECES, WASTE PLUGS, CASINGS, HANGERS, PLATES, BRACKETS, ANCHORS, SUPPORTS, HARDWARE AND FASTENING DEVICES. NOTE: ALL FIXTURES SHALL BE OF SAME MANUFACTURER. TRIMMINGS AND FITTINGS SHALL BE CONSTRUCT OF FORGED, CAST, ROLLED OR EXTRUDED BRASS OR BRONZE WITH MONEL AND OTHER SUITABLE NON-CORROSIVE PARTS: DESIGNED WITH EASILY RENEWABLE PARTS THAT ARE SUBJECT TO WEAR OR DETERIORATION. NO DIE CASTINGS AND STAMPINGS OTHER THAN BRASS OR STAINLESS STEEL. PROVIDE PLUMBING FIXTURES AND TRIM WITH ALL NECESSARY TRIM, DEVICES AND ACCESSORIES REQUIRED FOR PROPER OPERATIONS SPECIFICALLY NOTED OR NOT

ESCUTCHEONS SHALL BE ONE-PIECE CHROME PLATED CAST BRASS OR STAINLESS STEEL.

P-TRAPS SHALL BE ONE PIECE CHROME PLATED CAST BRASS WITH CLEANOUT PLUG.

EXAMINE ROUGHING-IN WORK OF POTABLE WATER AND WASTE PIPING SYSTEMS TO VERIFY ACTUAL LOCATIONS OF PIPING CONNECTIONS PRIOR TO INSTALLING FIXTURES. CORRECT ANY INCORRECT LOCATION OF PIPING, AND UNSATISFACTORY CONDITIONS FOR INSTALLATION OF PLUMBING FIXTURES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ROUGH-IN TO PLUMBING FIXTURES SHALL CONFORM TO FIXTURE MANUFACTURER PUBLISHED ROUGH-IN DIMENSIONS, AND REQUIREMENTS.

UPON COMPLETION OF INSTALLATION OF PLUMBING FIXTURES AND AFTER UNITS ARE WATER PRESSURIZED, TEST FIXTURES TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH REQUIREMENTS. CORRECT MALFUNCTIONING UNITS AT SITE, THEN RETEST TO DEMONSTRATE COMPLIANCE; OTHERWISE, REMOVE AND REPLACE WITH NEW UNITS AND PROCEED WITH RETESTING.

CLEAN PLUMBING FIXTURES, TRIM, AND STRAINERS OF DIRT AND DEBRIS UPON COMPLETION OF INSTALLATION.

ADJUST WATER PRESSURE AT DRINKING FOUNTAINS, FAUCETS, SHOWER VALVES, AND FLUSH VALVES TO PROVIDE PROPER FLOW STREAM AND SPECIFIED GPM.

SET FIXTURES LEVEL AND UNIFORMLY, WITH CONNECTIONS AT RIGHT ANGLES TO WALL AND PROPERLY CENTERED. LAY OUT ROUGHING ACCURATELY AND IN COORDINATION WITH SPACE AND FINISH REQUIREMENTS.

LOCATE WASTE OUTLETS AND WATER SUPPLIES AT CONSTANT HORIZONTAL LEVELS, WITH WASTE OUTLET CENTERED ON FIXTURE DRAIN CONNECTION AND WATER SUPPLIES SPACED EQUALLY TO RIGHT AND LEFT.

REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHTS OF EQUIPMENT. COLORS SHALL BE COORDINATED WITH THE ARCHITECT. CONTACT ARCHITECT FOR CLARIFICATION IF INFORMATION IS NOT CONTAINED IN THE DRAWINGS.

DRAINS AND CLEANOUTS

PROVIDE ALL POURED IN PLACE DRAINS AND CLEANOUTS WITH 24" X 24" FLASHING.

PROVIDE A MANUFACTURED BRONZE OUTLET FITTING FOR ALL SECONDARY ROOF DRAIN OUTLETS.

INSTALL EXTERIOR CLEANOUTS WITH A 18" SQUARE X 6" THICK CONCRETE APRON.

COORDINATE FLOOR DRAIN LOCATIONS WITH RESPECT TO EQUIPMENT HOUSEKEEPING PADS. PLACE DRAINS SUCH THAT EDGE OF THE FLOOR GRATE EXTENDS NO FURTHER THAN 2 INCHES FROM THE SIDE OF THE PAD. CLEANOUT PLUGS SHALL BE BRASS OR PLASTIC, OR OTHER APPROVED MATERIALS. BRASS CLEANOUT PLUGS SHALL BE UTILIZED WITH METALLIC DRAIN, WASTE AND VENT PIPING ONLY, AND SHALL CONFORM TO ASTM A 74, ASME A112.3.1 OR ASME A112.36.2M. CLEANOUTS WITH PLATE-STYLE ACCESS COVERS SHALL BE FITTED WITH CORROSION-RESISTING FASTENERS. PLUGS SHALL HAVE RAISED SQUARE OR COUNTERSUNK SQUARE HEADS. COUNTERSUNK HEADS SHALL BE INSTALLED WHERE RAISED HEADS ARE A TRIP HAZARD. CLEANOUT PLUGS WITH BOROSILICATE GLASS SYSTEMS SHALL BE OF BOROSILICATE GLASS.

PROVIDE TRAP PRIMERS FOR EACH FLOOR DRAIN. CONNECT TRAP PRIMER TO NEAREST COLD WATER MAIN. PROVIDE ISOLATION VALVE AND EXTEND TO FLOOR DRAIN AS REQUIRED.

CLEANOUTS SHALL BE LOCATED AT MINIMUM INTERVALS OF 50 FEET FOR PIPING NPS 4 AND SMALLER AND 100 FEET FOR LARGER PIPING.

BUILDING SEWERS SHALL BE PROVIDED WITH CLEANOUTS LOCATED NOT MORE THAN 100 FEET APART MEASURED FROM THE UPSTREAM ENTRANCE OF THE CLEANOUT. FOR BUILDING SEWERS 8 INCHES AND LARGER, MANHOLES SHALL BE PROVIDED AND LOCATED NOT MORE THAN 200 FEET FROM THE JUNCTION OF THE BUILDING DRAIN AND BUILDING SEWER, AT EACH CHANGE IN DIRECTION AND AT INTERVALS OF NOT MORE THAN 400 FEET APART. MANHOLES AND MANHOLE COVERS SHALL BE OF AN APPROVED TYPE.

CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION OF THE BUILDING DRAIN OR HORIZONTAL WASTE OR SOIL LINES GREATER THAN 45 DEGREES (INCLUDING P-TRAPS). WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE PIPING.

A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE OR SOIL STACK.

THERE SHALL BE A CLEANOUT NEAR THE JUNCTION OF THE BUILDING DRAIN AND THE BUILDING SEWER. THE CLEANOUT SHALL BE EITHER INSIDE OR OUTSIDE THE BUILDING WALL AND SHALL BE BROUGHT UP TO THE FINISHED GROUND LEVEL OR TO THE BASEMENT FLOOR LEVEL. AN APPROVED TWO-WAY CLEANOUT IS ALLOWED TO BE USED AT THIS LOCATION TO SERVE AS A REQUIRED CLEANOUT FOR BOTH THE BUILDING DRAIN AND BUILDING SEWER. THE CLEANOUT AT THE JUNCTION OF THE BUILDING DRAIN AND BUILDING SEWER SHALL NOT BE REQUIRED IF THE CLEANOUT ON A 3-INCH OR LARGER DIAMETER SOIL STACK IS LOCATED WITHIN A DEVELOPED LENGTH OF 10 FEET OF THE BUILDING DRAIN AND BUILDING SEWER CONNECTION.

CONCEALED PIPING. CLEANOUTS ON CONCEALED PIPING OR PIPING UNDER A FLOOR SLAB OR IN A CRAWL SPACE OF LESS THAN 24 INCHES IN HEIGHT OR A PLENUM SHALL BE EXTENDED THROUGH AND TERMINATE FLUSH WITH THE FINISHED WALL, FLOOR OR GROUND SURFACE OR SHALL BE EXTENDED TO THE OUTSIDE OF THE BUILDING. CLEANOUT PLUGS SHALL NOT BE COVERED WITH CEMENT, PLASTER OR ANY OTHER PERMANENT FINISH MATERIAL. WHERE IT IS NECESSARY TO CONCEAL A CLEANOUT OR TO TERMINATE A CLEANOUT IN AN AREA SUBJECT TO VEHICULAR TRAFFIC, THE COVERING PLATE, ACCESS DOOR OR CLEANOUT SHALL BE OF AN APPROVED TYPE DESIGNED AND INSTALLED FOR THIS PURPOSE.

MINIMUM SIZE. CLEANOUTS SHALL BE THE SAME NOMINAL SIZE AS THE PIPE THEY SERVE UP TO 4 INCHES. FOR PIPES LARGER THAN 4 INCHES NOMINAL SIZE, THE MINIMUM SIZE OF THE CLEANOUT SHALL BE 4 INCHES.

CAST-IRON CLEANOUT SIZING SHALL BE IN ACCORDANCE WITH ASTM A 74 FOR HUB AND SPIGOT FITTINGS OR ASTM A 888 OR CISPI 301 FOR HUBLESS FITTINGS.

ACCESS SHALL BE PROVIDED TO ALL CLEANOUTS.

PROVIDE CONDENSATE DRAINAGE, COMPLETE WITH CONDENSATE REMOVAL PUMP, FOR EACH COOLING COIL. CONDENSATE PUMP DISCHARGE SHALL BE CONNECTED VIA INDIRECT WASTE CONNECTION TO BUILDING SANITARY/WASTE PIPING SYSTEM. COORDINATE PUMP WIRING WITH PROJECT ELECTRICIAN. IF GRAVITY DRAINAGE IS POSSIBLE WITHIN THE CONSTRAINTS OF PIPING PITCH, CONCEALMENT ABOVE CEILINGS, AND ONLY AFTER COMPLETE COORDINATION WITH STRUCTURE AND OTHER TRADES, THE CONTRACTOR MAY SUBMIT SKETCH PROPOSALS FOR GRAVITY ROUTING FOR REVIEW/APPROVAL.

MISCELLANEOUS SPECIALTIES

ALL EQUIPMENT, VALVES, STRAINERS, UNIONS, TRAPS, FLANGES AND OTHER APPURTENANCES REQUIRING ACCESS SHALL BE LOCATED IN ACCESSIBLE LOCATIONS. WHEN A PIECE OF EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING OR WALL THEN THE APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. SUCH EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO CLEANOUTS, WATER HAMMER ARRESTORS AND VALVES. THESE SHALL BE COORDINATED WITH THE ARCHITECT. ACCESS DOORS SHALL BE RIGID CONSTRUCTION WITH TWO HINGES AND A LATCH. IN PLENUM CEILINGS, PROVIDE FELT BETWEEN THE DOOR AND FRAME TO MAKE AN AIR TIGHT SEAL. ACCESS DOORS SHALL BE RATED TO THE SAME OR GREATER RATING OF THE PARTITION IN WHICH THEY ARE INSTALLED. ACCESS DOORS SHALL BE FLUSH MOUNTED, PRIME COATED WITH RUST INHIBITIVE PAINT, CONCEALED FRAME, FLUSH SCREW DRIVER OPERATED LOCKS WITH METAL CAMS AND ANCHORS AS REQUIRED.

ACCESS DOOR SIZES SHALL BE:
12" X 12" AT EASILY ACCESSIBLE ITEMS
16" X 16" WHERE PARTIAL BODY ACCESS IS REQUIRED
24" X 24" WHERE FULL BODY ACCESS IS REQUIRED

PROVIDE AND INSTALL DRIP PANS WITH WATER DETECTOR AND DRAIN FOR PIPING REQUIRED BY ACTUAL FIELD CONDITIONS WHERE PIPING PASSES OVER INCLUDING AREA WITHIN 3'-0" OF ELECTRICAL EQUIPMENT.

DO NOT INSTALL AIR GAP BACKFLOW PREVENTERS IN CONCEALED SPACES OR IN AREAS WHERE SPLASHING WATER WILL DAMAGE FINISHES. PROVIDE AND INSTALL AN OVERSIZED COPPER FUNNEL WITH AIR GAP DIRECTLY BELOW RPD PRESSURE RELIEF PORT. PIPE FUNNEL TO SPILL AS AN INDIRECT WASTE TO AN APPROVED DRAIN LOCATION.

INSTALL ELECTRONIC TRAP PRIMERS SERVING ALL DRAINS. INSTALL ALL TRAP PRIMER VALVES IN AN ACCESSIBLE LOCATION. PROVIDE AND INSTALL ACCESS PANELS AND DOORS WHERE REQUIRED TO GAIN ACCESS IN CONCEALED CONSTRUCTION.

PROVIDE FLEXIBLE CONNECTIONS IN ALL PIPING SYSTEMS CONNECTED TO PUMPS AND OTHER EQUIPMENT WHICH REQUIRES VIBRATION ISOLATION, EXCEPT WATER COILS. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AS CLOSE TO THE EQUIPMENT AS POSSIBLE.

PIPING GENERAL

NO PIPING SHALL BE COVERED UNTIL TESTED APPROVED BY THE AUTHORITIES HAVING JURISDICTION.

ALL PIPING SHALL BE RUN PERPENDICULAR AND/OR PARALLEL TO FLOORS, INTERIOR WALLS, ETC. PIPING AND VALVES SHALL BE GROUPED NEATLY AND SHALL BE RUN AS TO MAXIMIZE HEADROOM OR PASSAGE CLEARANCE. ALL VALVES, CONTROLS AND ACCESSORIES CONCEALED IN FURRED SPACES AND REQUIRING ACCESS FOR OPERATION AND MAINTENANCE SHALL BE ARRANGED TO ASSURE THE USE OF A MINIMUM NUMBER OF ACCESS DOORS.

ALL PIPE LINES MADE WITH SCREWED FITTINGS MUST BE PROVIDED WITH A SUFFICIENT NUMBER OF FLANGES AND/OR UNIONS TO ALLOW FOR EASY AND CONVENIENT DISMANTLING OF THE SYSTEM WITHOUT BREAKING FITTINGS.

ALL PIPING SHALL RUN CONCEALED IN FURRED SPACES OF OCCUPIED AREAS OR CHASES. CONTRACTOR SHALL OBTAIN PERMISSION TO RUN ANY EXPOSED PIPES.

CAP ALL PIPE AND EQUIPMENT OUTLETS DURING CONSTRUCTION AND KEEP LINES AND INSIDE OF EQUIPMENT FREE OF FOREIGN MATERIALS.

PROVIDE FOR EXPANSION WITHOUT WARPING OR DISLOCATING LINES OR STRAINING CONNECTED EQUIPMENT. INSTALL PIPING TO CLEAR BUILDING CONSTRUCTION AND TO AVOID INTERFERENCE WITH OTHER WORK. THE CONTRACTOR SHALL PROVIDE AND INSTALL COMPLETE PIPING EXPANSION SYSTEM (INCLUDING SEISMIC JOINT EXPANSION) AND DEVICES AS REQUIRED FOR PROPER EXPANSION COMPENSATION STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

THE DRAWINGS INDICATE SCHEMATICALLY THE SIZE AND LOCATION OF PIPING. PIPING SHALL BE SET UP AND DOWN AND OFFSET AS REQUIRED TO MEET CONSTRUCTION CONDITIONS.

THIS CONTRACTOR SHALL INFORM HIMSELF FROM THE GENERAL CONSTRUCTION SPECIFICATIONS AND PLANS, OF THE EXACT DIMENSION OF FINISHED WORK AND OF THE HEIGHT OF FINISHED CEILINGS IN ALL ROOMS WHERE EQUIPMENT OR PIPES ARE TO BE PLACED AND ARRANGE HIS WORK IN ACCORDANCE WITH THE SCHEDULE OF INTERIOR FINISHES, AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

WATER PIPING SHALL BE RUN FREE OF TRAPS AND UNNECESSARY BENDS. ANY TRAPS FORMED SHALL BE PROVIDED WITH HOSE END DRAIN VALVES WITH THREADED CAP AND CHAIN TO COMPLETELY DRAIN THE SYSTEM.

PROVIDE SECTION CUT-OFF VALVES ON ALL MAINS AND BRANCHES. PITCH AND VALVE ALL WATER PIPING FOR CONVENIENT DRAINAGE.

UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES AND IN LONG PIPING RUNS (100 FEET OR MORE) TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS.

WHEREVER DISSIMILAR METALS ARE JOINED TOGETHER AN APPROVED DIELECTRIC FITTING SHALL BE USED. THE DIELECTRIC FITTING SHALL BE A LISTED ASSEMBLY.

RUN ALL SOIL, WASTE AND VENT PIPING SHOWN OR REQUIRED BY LOCAL CODES. PIPING SHOWN IS MINIMUM AND IN ACCORDANCE WITH STATE AND FEDERAL CODES. IF LOCAL CODES REQUIRE ADDITIONAL VENTING OR LARGER SIZES, PROVIDE AS REQUIRED.

MAKE ALL CONNECTIONS THROUGH TRAPS. EACH TRAP TO BE VENTED, EITHER BY CIRCUIT, LOOP, OR INDIVIDUAL VENT, AS REQUIRED, BUT NOT LESS THAN SHOWN, OR AS REQUIRED BY LOCAL CODE.

ALL UNDERGROUND PIPING SHALL BE LAID ON 6" SAND AND BACKFILLED WITH CLEAN FINE EARTH COMPACTED TO 12" ABOVE PIPE. COMPLETE BACKFILL WITH AVAILABLE EARTH FREE OF LARGE BOULDERS AND SHARP ROCKS. TAMP BACKFILL IN 6" ELEVATIONS AND OVERFILL TO ALLOW FOR SETTLEMENT.

SET AND PROPERLY CONNECT ALL FIXTURES WITH HOT AND COLD WATER, VENT AND DRAINAGE PIPING, AS REQUIRED AND PROTECT FIXTURES UNTIL ACCEPTANCE AND TEST. CLEAN ALL FLUSH VALVES AFTER TWO WEEKS OF OPERATION.

INSTALL THRUST BLOCKS FOR UNDERGROUND WATER PIPING AT ALL CHANGES IN DIRECTION BOTH HORIZONTALLY AND VERTICALLY. THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH OR EARTH. THRUST BLOCKS SHALL BE INSTALLED IN ACCORDANCE WITH THE DUCTILE IRON PIPE RESEACH ASSOCIATION (DIPRA) MANUAL "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AND LOCAL UTILITY COMPANY REQUIREMENTS.

GAS PIPING

INSTALL GAS PIPING, AND GAS PIPING SPECIALTIES IN ACCORDANCE WITH NFPA 54 AND AUTHORITIES HAVING JURISDICTION.

PROVIDE AND INSTALL INDEPENDENT GAS PRESSURE REGULATOR VENTS TO THE EXTERIOR AS REQUIRED IN NFPA 54 AND THE REGULATOR MANUFACTURERS REQUIREMENTS.

LOCATE GAS PIPING WITH ADEQUATE SEPARATION BETWEEN ELECTRICAL CABLES, EQUIPMENT, AND CONDUIT.

SLOPE GAS PIPING TO LOW POINTS WITHOUT TRAPS. PROVIDE DRIPS (PIPE TEE, NIPPLE, AND CAP) AT BOTTOM OF ALL VERTICAL RISERS AND DROPS.

MAKE BRANCH CONNECTIONS TO MAINS FROM TOP OR SIDE, NOT FROM BOTTOM OF MAIN.

PROVIDE AND INSTALL GAS SHUT-OFF VALVES FOR THE PROPER AND SAFE CONTROL OF THE SYSTEM.

DO NOT LOCATE GAS VALVES IN SPACES USED AS AIR PLENUMS.

VERIFICATION: BEFORE MAKING A GAS CONNECTION, VERIFY THAT EQUIPMENT IS COMPATIBLE WITH THE TYPE AND PRESSURE OF GAS BEING SUPPLIED.

PURGING: PURGE GAS TO SAFE LOCATION.

PLUMBING PIPING SYSTEM LEGEND

EXISTING	NEW	DESCRIPTION
CW	CW	DOMESTIC COLD WATER
-HW-	HW	DOMESTIC HOT WATER SUPPLY
140° HW	140° HW	DOMESTIC 140°F HOT WATER SUPPLY
—HWC—	—HWC—	DOMESTIC HOT WATER RECIRCULATION
140°HWC	140°HWC	DOM. 140° HOT WATER RECIRCULATION
AF	AF	APPARATUS FILL (NON-POTABLE CW)
S	S	SANITARY WASTE
S	S	SANITARY WASTE BELOW SLAB
V	V	SANITARY VENT
ST	ST	STORM DRAIN
ST	ST	STORM DRAIN BELOW SLAB
OS	OS	OVERFLOW STORM
G	G	NATURAL GAS
G	G	NATURAL GAS BELOW SLAB
RV	RV	RADON VENT
CA	CA	COMPRESSED AIR
CD	CD	CONDENSATE DRAIN
FM	FM	FORCE MAIN
FM	FM	FORCE MAIN BELOW SLAB
IW	IW	INDIRECT WASTE
KW	KW	KITCHEN GREASE WASTE
KW	KW	KITCHEN GREASE WASTE BELOW SLAB
DW	DW	DECON WASTE
DW	DW	DECON WASTE BELOW SLAB
KV	KV	KITCHEN WASTE VENT
OW	OW	OIL WASTE
OW	OW	OIL WASTE BELOW SLAB

PLUMBING SYMBOL LEGEND

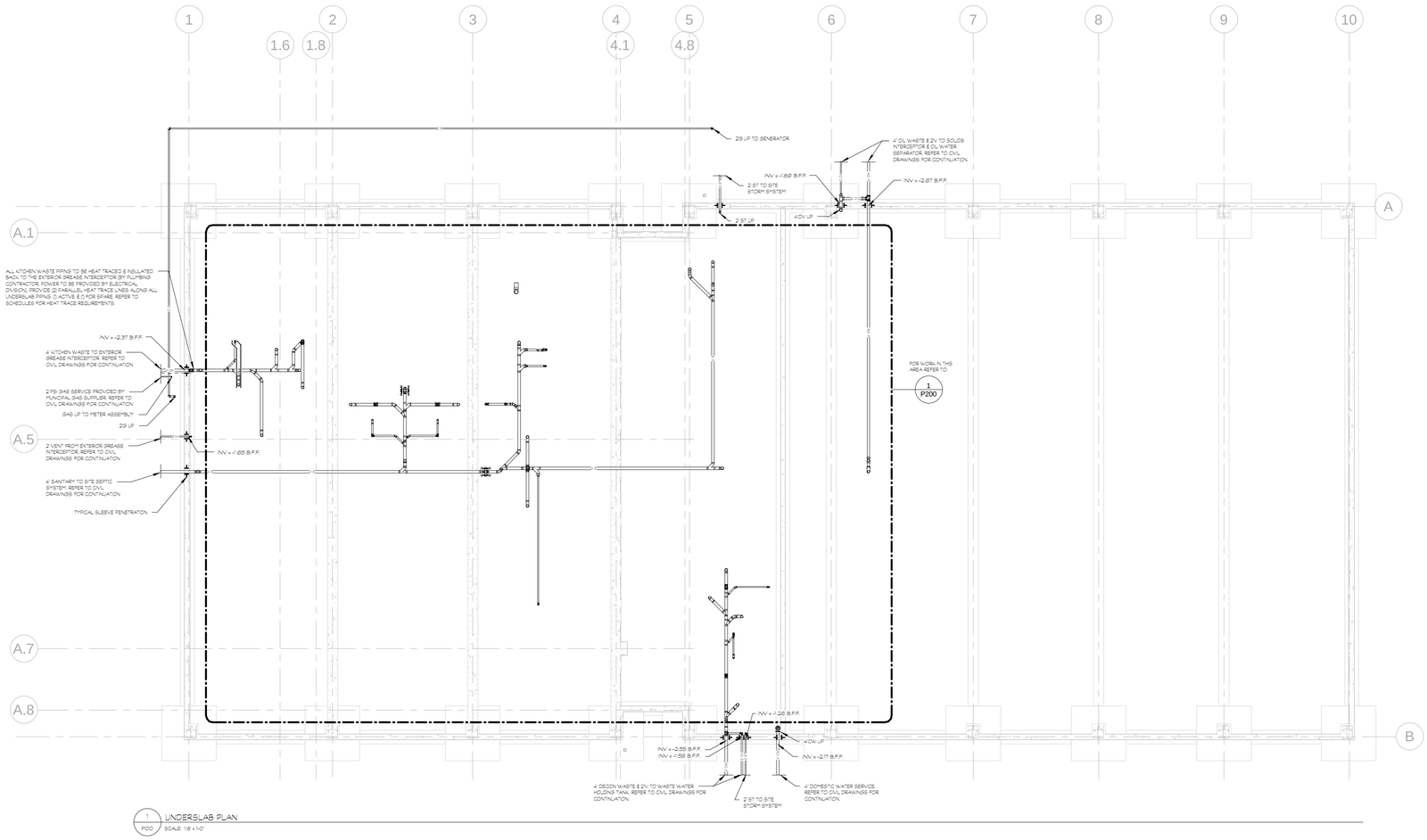
SYMBOL	DESCRIPTION
	AIR ADMITTING VALVE
	BALANCING VALVE
	BALL VALVE
	CHECK VALVE
	GAS VALVE
	PRESSURE REDUCING VALVE
	GATE VALVE
	SUPPLY VALVE
	REDUCED PRESSURE BACKFLOW PREVENTER
	FLOOR DRAIN
	FLOOR SINK WITH GRATE
	TRENCH DRAIN
TP	TRAP PRIMER
	"P" TRAP
	PIPE DOWN
	PIPE UP
	CAPPED PIPE
	CLEANOUT PLUG
	UNION
	DIRECTION OF FLOW
XXX	PLUMBING FIXTURE
XXX-A	ADA COMPLIANT PLUMBING FIXTURE

PLUMBING DRAWING INDEX

SHEET	DESCRIPTION
P001	NOTES AND LEGENDS - PLUMBING
P100	UNDERSLAB PLAN - PLUMBING
P101	FIRST FLOOR PLAN - PLUMBING
P102	UPPER LEVEL PLAN - PLUMBING
P200	UNDERSLAB PART PLAN - PLUMBING
P201	PARTIAL PLANS - PLUMBING
P300	SUPPLY ISOMETRIC PLANS - PLUMBING
P301	DRAINAGE ISOMETRIC PLAN - PLUMBING
P400	SCHEDULES - PLUMBING
P500	DETAILS - PLUMBING
P501	DETAILS - PLUMBING

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	



1 P100 UNDERSLAB PLAN
SCALE: 1/8" = 1'-0"

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
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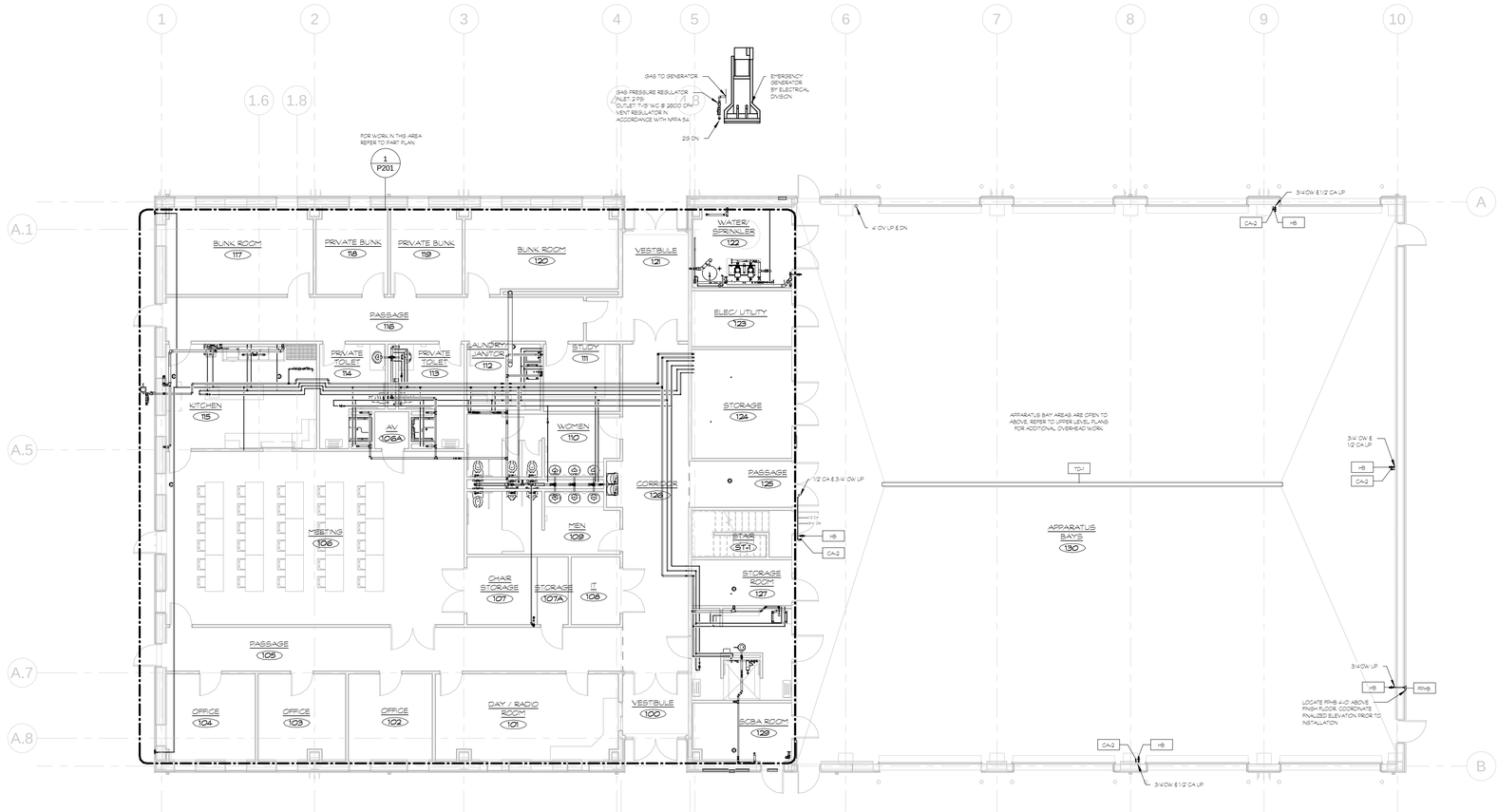
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REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
UNDERSLAB PLAN - PLUMBING

100% CD Submission

Date: 12/16
Scale: 1/8" = 1'-0"
Drawn By: MPB
Project Number: 13.220

Drawing Number:
P100



1 MAIN LEVEL PLAN
P101 SCALE: 1/8" = 1'-0"

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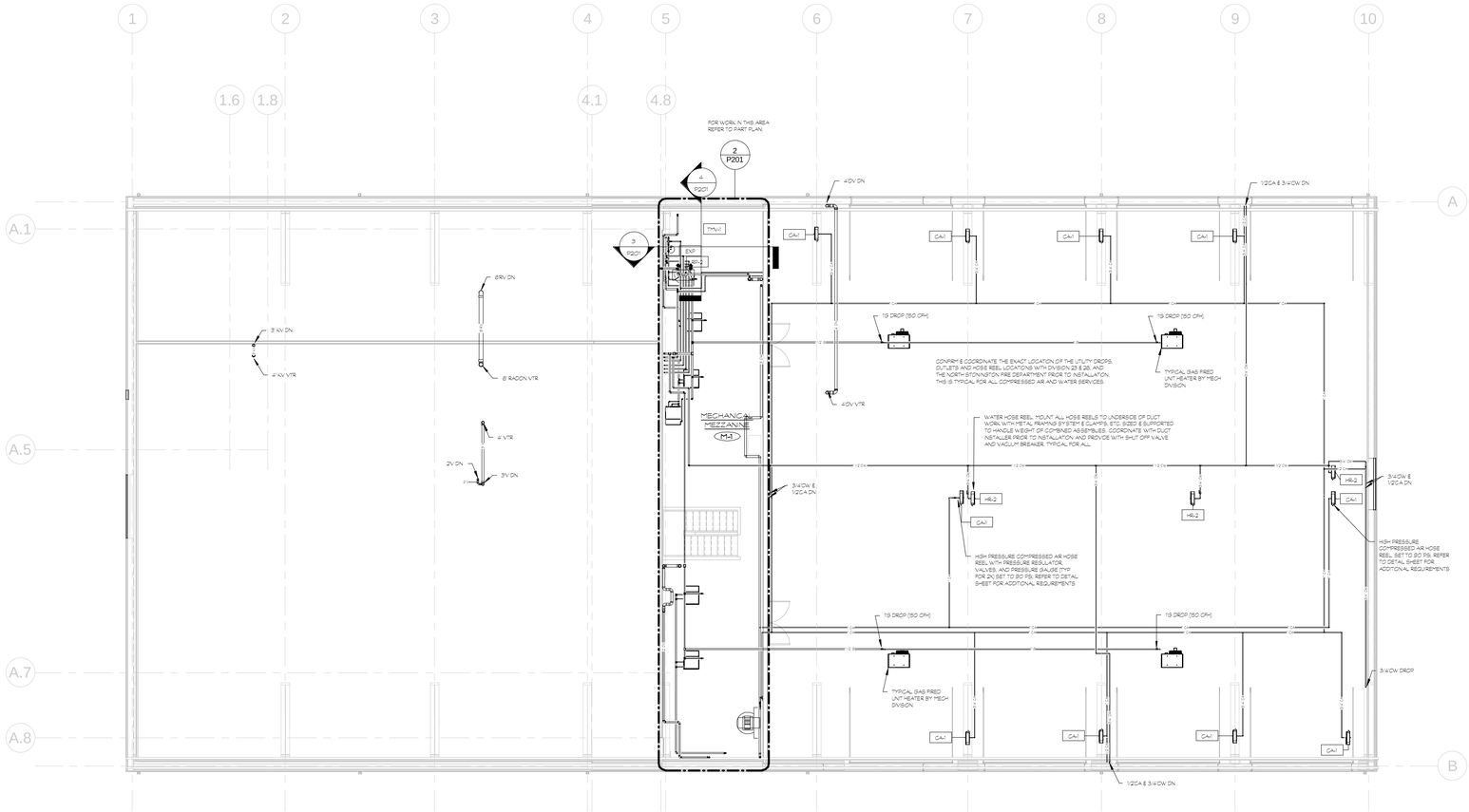
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REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
FIRST FLOOR PLAN - PLUMBING

100% CD Submission

Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: MPB
Project Number: 13.220

Drawing Number:
P101



1 P102 UPPER LEVEL PLAN
SCALE: 1/8" = 1'-0"

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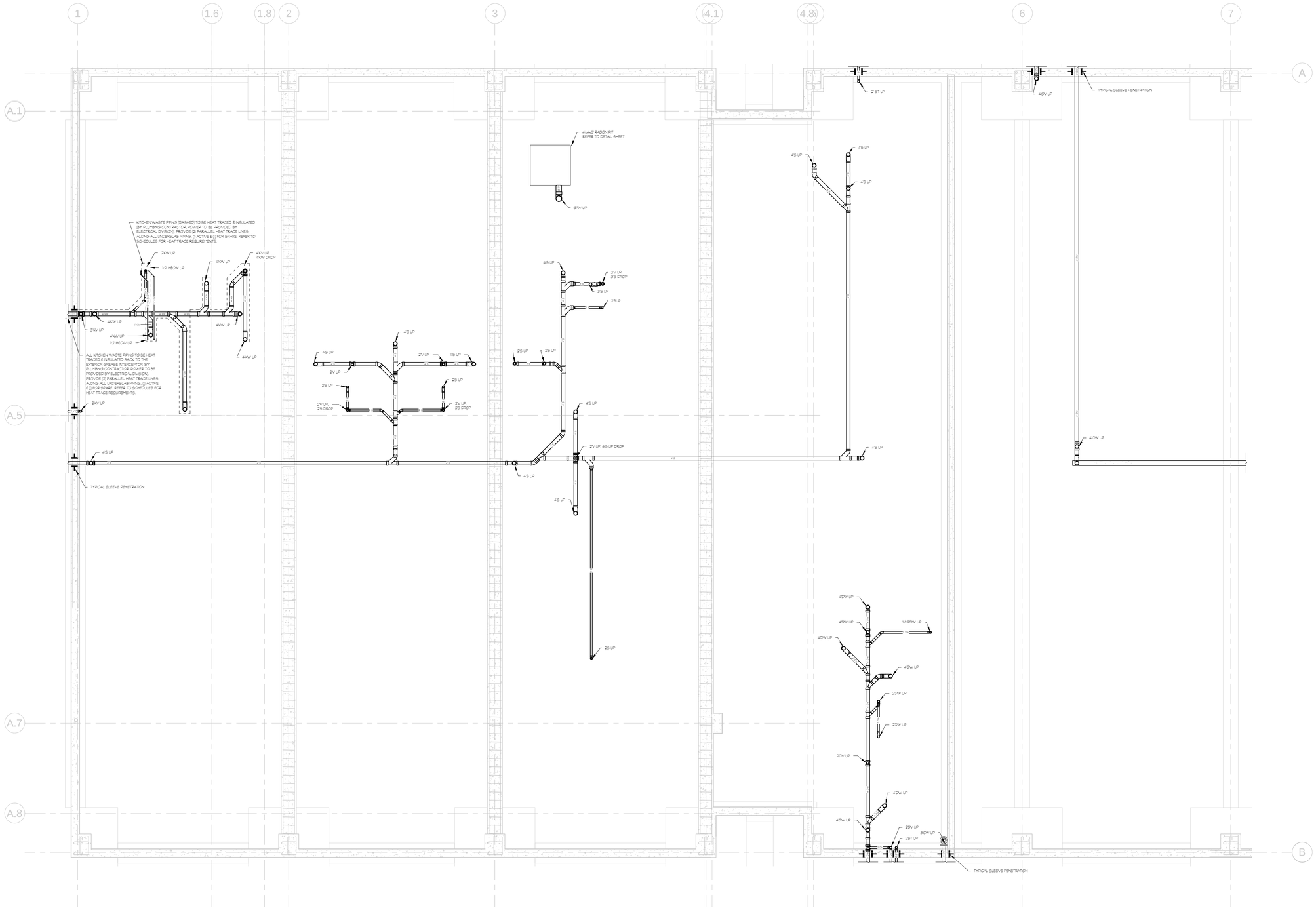
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REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
UPPER LEVEL PLAN - PLUMBING

100% CD Submission

Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: MPB
Project Number: 13.220

Drawing Number:
P102



1 / P200 UNDERSLAB PART PLAN
SCALE: 1/4" = 1'-0"

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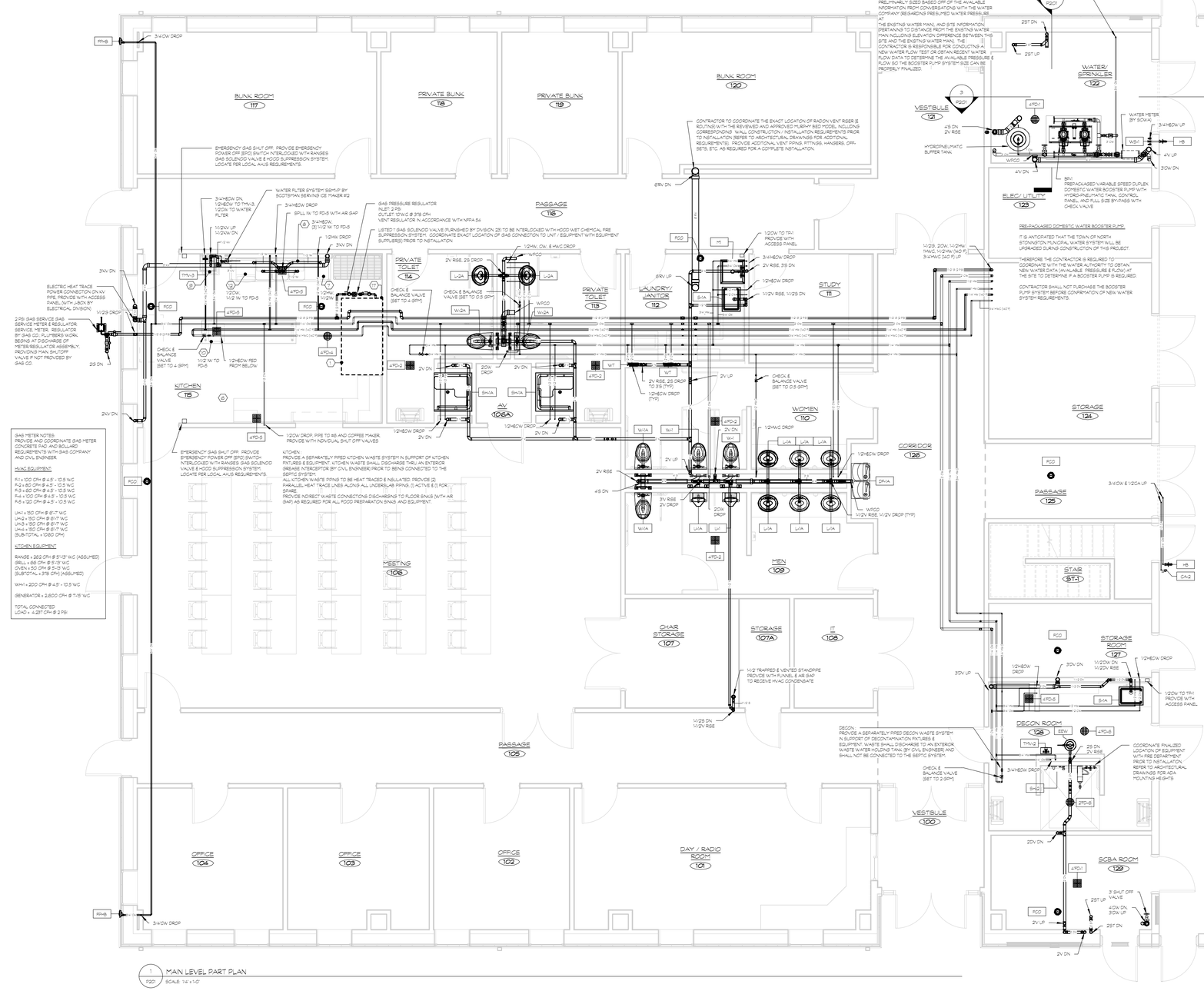
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REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
UNDERSLAB PART PLAN - PLUMBING

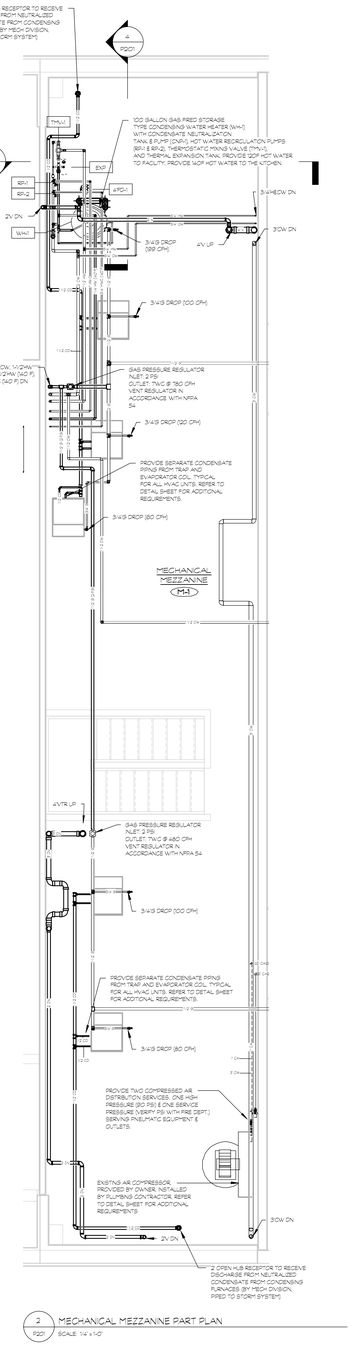
100% CD Submission

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Project Number: 13.220

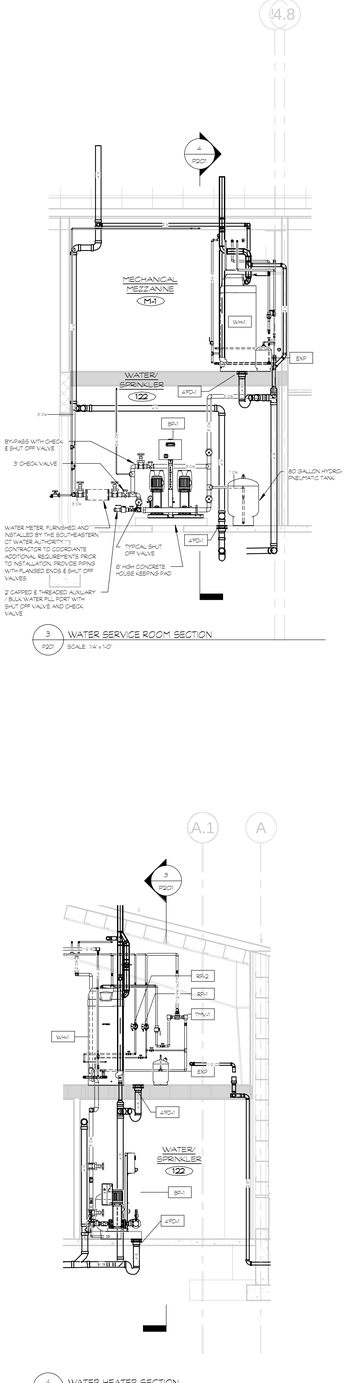
Drawing Number: P200



1 P201 MAIN LEVEL PART PLAN
SCALE: 1/4" = 1'-0"



2 P201 MECHANICAL MEZZANINE PART PLAN
SCALE: 1/4" = 1'-0"



3 P201 WATER SERVICE ROOM SECTION
SCALE: 1/4" = 1'-0"

4 P201 WATER HEATER SECTION
SCALE: 1/4" = 1'-0"

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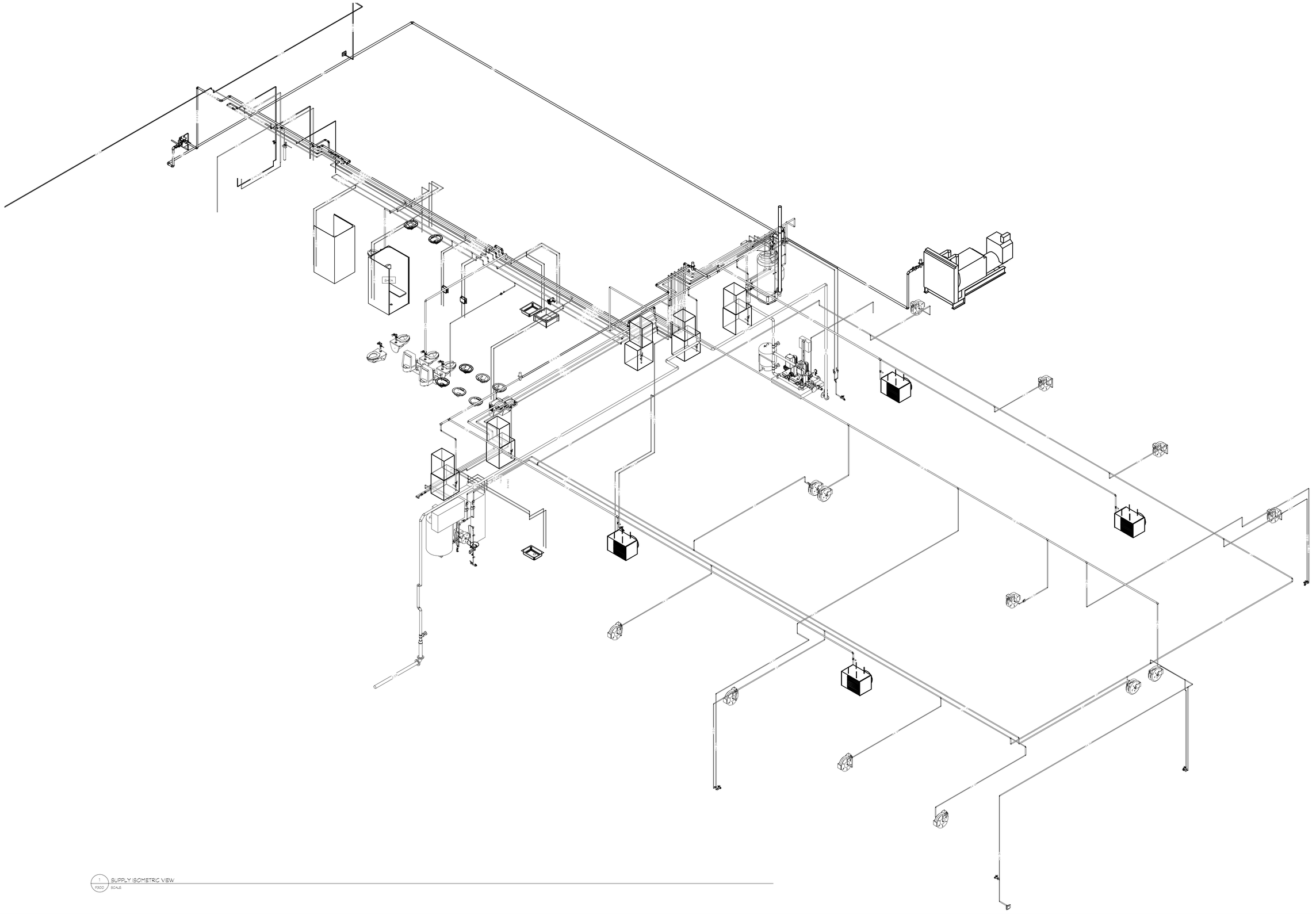
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REV 1	100% CD Submission	1/5/17	
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Drawing Title:
PART PLANS - PLUMBING

100% CD Submission

Date: 12/1/16
Scale: 1/4" = 1'-0"
Drawn By: MPB
Project Number: 13.220

Drawing Number: P201



1 P300 SUPPLY ISOMETRIC VIEW
SCALE

Project Title:
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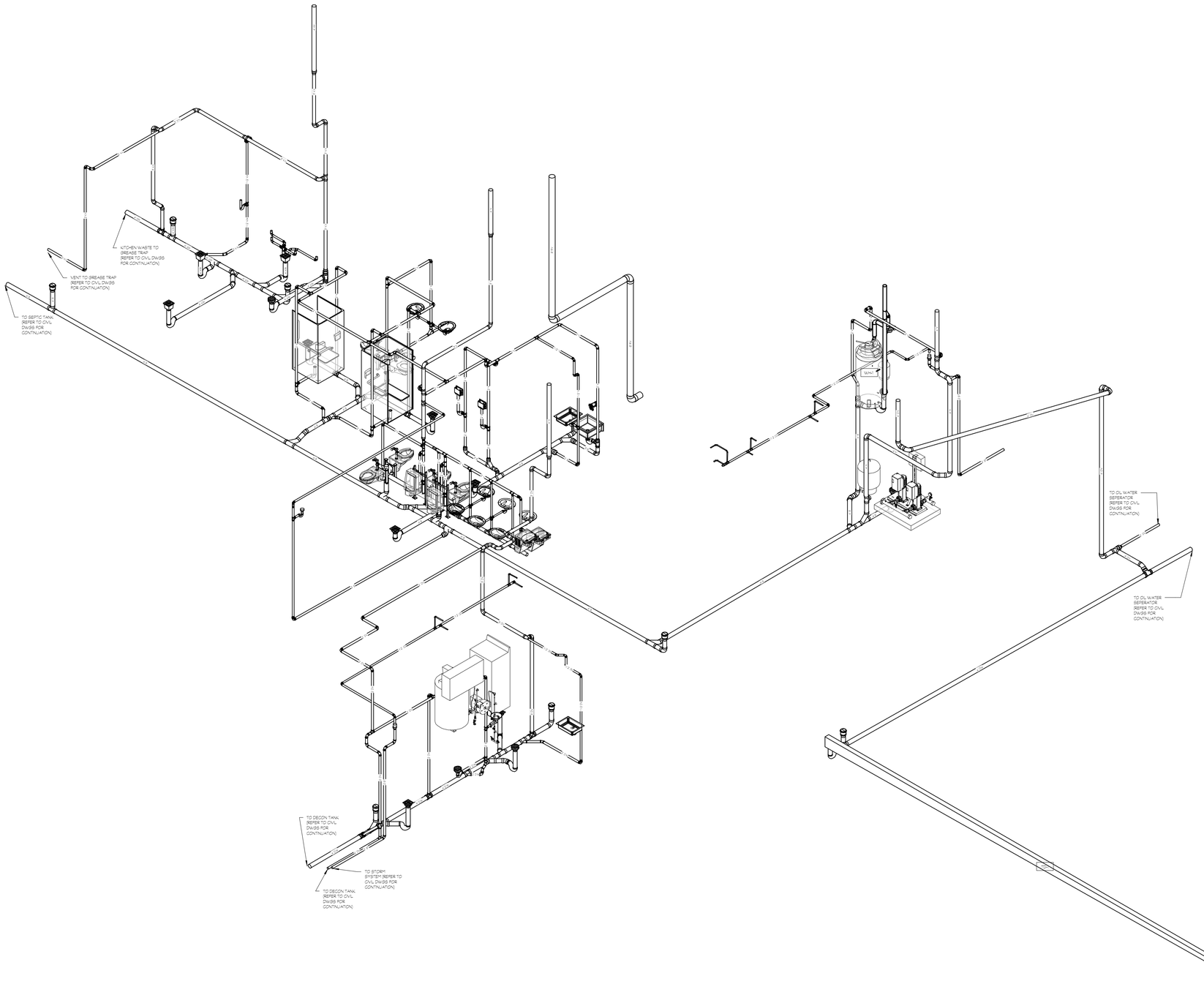
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REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
SUPPLY ISOMETRIC PLANS - PLUMBING

100% CD Submission

Date: 12/1/16
Scale:
Drawn By: MPB
Project Number: 13.220

Drawing Number:
P300



1 P301 DWV ISOMETRIC VIEW SCALE

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
DRAINAGE ISOMETRIC PLAN - PLUMBING

100% CD Submission

Date: 12/1/16
Scale:
Drawn By: MPB
Project Number: 13.220

Drawing Number: P301

PIPE AND FITTING SCHEDULE

DESCRIPTION	SIZE	PIPE TYPE	PIPE SCHEDULE	FITTING TYPE	FITTING RATING	REMARKS
SOIL , WASTE AND VENT ABOVE GROUND	ALL	CI-NH / PVC	SV / SCH 40	CI / PVC	SV	PVC NOT FOR PLENUM RATED CEILING, 4 BAND FOR 4" AND SMALLER, 6 BAND FOR LGR THEN 4"
SOIL, WASTE AND VENT BELOW GROUND	ALL	CI-H&S / PVC	SV / SCH 40	CI / PVC	SV	--
KITCHEN WASTE & VENT ABOVE GROUND	ALL	CI-NH	SV	CI	SV	PVC NOT FOR PLENUM RATED CEILING, 4 BAND FOR 4" AND SMALLER, 6 BAND FOR LGR THEN 4"
ALL CONCEALED DECON (DW) & VENT & OIL (OW) WASTE & VENT	ALL	PVC	SCH 40	PVC	SV	--
ALL EXPOSED DECON VENT (DV) & OIL (OV) WASTE VENT	ALL	CI-H&S	SV	CI	SV	--
KITCHEN WASTE & VENT BELOW GROUND	ALL	CI-H&S	SV	CI	SV	
DOMESTIC COLD, HOT, & HWC MAIN WATER DISTRIBUTION PIPING WITHIN BUILDING	ALL	COPPER	TYPE L	CUS	STD	HARD TEMPERED
DOMESTIC COLD, HOT & HWC BRANCH WATER PIPING WITHIN BUILDING	ALL	COPPER / PEX	TYPE L / SDR 9	CUS	STD	HARD TEMPERED, PEX NOT FOR PLENUM CEILINGS
INDIRECT WASTE	ALL	COPPER	TYPE L	CUS	STD	HARD TEMPERED
CONDENSATE PIPING	ALL	PVC	40	PVC	SV	PVC NOT FOR PLENUM RATED CEILING,
DOMESTIC WATER SERVICE PIPING	3" AND LARGER	CLDI	CLASS 52	DIMJ	250	--
TRAP PRIMER PIPING	ALL	PEX	--	--	--	NO JOINTS ALLOWED BELOW SLAB
GAS PIPING (LOW PRESSURE ONLY)	1" AND SMALLER	STL-BLK / CSST	SCH 40	MIT / TJ	CLASS 150	< 14"WC INLET PRESSURE, APPROVED FOR INDIVIDUAL RUNS <20' FROM BRANCH PIPING TO EQUIPMENT. NOT APPROVED FOR 2 PSI, BOND ACCORDINGLY
GAS PIPING	2" AND SMALLER	STL-BLK	SCH. 40	MIT	CLASS 150	--
GAS PIPING	2-1/2" AND LARGER	STL-BLK	SCH. 40	WE	SCH. 40	--
GAS PIPING EXTERIOR BELOW GRADE	ALL	PE	--	WE	--	--
COMPRESSED AIR	2" AND SMALLER	COPPER	TYPE L	CUS	CLASS 125	--
FORCE MAIN (ABOVE GROUND)	2" AND SMALLER	COPPER	TYPE L	CUS	STD	--

NOTES:
1. TRANSITION COUPLINGS AND NO-HUB PIPE SHALL NOT BE INSTALLED BELOW SLAB OR IN ANY BURIED CONDITIONS IN CONTACT WITH EARTH

2. ALL PIPING IN RETURN AIR CEILING PLENUM INSTALLATIONS SHALL BE UL LISTED FOR THIS APPLICATION

3. MECHANICAL JOINTS ARE ALLOWED FOR SERVICE PURPOSED ONLY IN WALLS AND CEILINGS BUT MUST BE READILY ACCESSIBLE. 25/50 PVDF IS UL LISTED FOR RETURN AIR CEILING PLENUM ISTALLATIONS

ABBREVIATIONS	DESCRIPTION	ABBREVIATIONS	DESCRIPTION
AWWA	AMERICAN WATER WORKS ASSOCATION	MIT	MALLEABLE IRON THREADED
CI	CAST IRON	NH	NO HUB W/SUPER DUTY HUSKY SD 4000 CLAMP
CLDI	CEMENT LINED DUCTILE IRON	PEX	PEX PIPING
MJ	MECHANICAL JOINT	PF	PRESSURE FITTING
CUS	WROUGHT COPPER SOLDER (95/5)	CSST	CORRUGATED STAINLESS STEEL TUBING
DI	DUCTILE IRON	STD	STANDARD
DIMJ	DUCTILE IRON MECHANICAL JOINT	STL-BLK	BLACK STEEL
H&S	HUB AND SPIGOT	SV	SERVICE WEIGHT
		TJ	THREADED JOINTS

VALVE SCHEDULE

DESCRIPTION	SIZE	GATE	GLOBE	CHECK	BALL	PLUG	BALANCE	CLASS	REMARKS
DOMESTIC COLD WATER	2" AND SMALLER	GVT	GLVT	CVT	BVT	--	--	125PSI	--
DOMESTIC HOT WATER	2" AND SMALLER	GVT	GLVT	CVT	BVT	--	CBV	125PSI	--
DOMESTIC COLD WATER	2-1/2" AND LARGER	GVF	--	CVF	--	--	--	125PSI	--
DOMESTIC HOT WATER	2-1/2" AND LARGER	GVF	--	CVF	--	--	CBV	125PSI	--
BACKFLOW PREVENTER	2" AND SMALLER	--	--	--	BVT	--	--	125PSI	--
BACKFLOW PREVENTER	2-1/2" AND LARGER	GVF	--	--	--	--	--	125PSI	--
GAS	2" AND SMALLER	--	--	--	BVT	PGVT	--	125PSI	--
GAS	2-1/2" AND LARGER	--	--	--	--	PGVF	--	125PSI	--
COMPRESSED AIR	ALL	--	--	--	BVA	--	--	600PSI	--

(GATE, GLOBE, CHECK, BALL, PLUG, BALANCE under TYPE)

NOTES:
1. CALIBRATED PRESSURE RELIEF VALVE: INSTALL A MINIMUM OF 12" ABOVE WATER HEATER AND PIPE DISCHARGE TO ADEQUATE LOCATION. WATTS MODEL 540C

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
BVA	BALL VALVE COMPRESSED AIR - 3-PIECEI, FULL PORT, BRONZE	CVF	CHECK VALVE FLANGED - IMMB
BVF	BALL VALVE FLANGED - FULL PORT, BRONZE	CVT	CHECK VALVE THREADED - BRONZE
CPRV	CALIBRATED PRESSURE RELIEF VALVE	GVF	GATE VALVE FLANGED - IMMB
PGVT	PLUG VALVE THREADED - AGA APPROVED	GVT	GATE VALVE THREADED - BRONZE
BVT	BALL VALVE THREADED - 2-PIECE, FULL PORT, 400PSI, BRONZE	PGVF	PLUG VALVE FLANGED - AGA APPROVED
CBV	CALIBRATED BALANCING VALVE - BRONZE		

INSULATION SCHEDULE

SYSTEM	PIPE SIZE	INSULATION TYPE	INSULATION THICKNESS	FITTINGS, VALVES, FLANGES INSULATION TYPE	REMARKS
DOMESTIC COLD WATER	ALL	MINERAL FIBER, ASJ, SSL	1"	MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET	TYPE 1
DOMESTIC HOT WATER	ALL	MINERAL FIBER, ASJ, SSL	1"	MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET	TYPE 1
DOMESTIC WATER UNDERGROUND & INSLAB	ALL	CLOSED CELL	1"	ARMAFLEX	--
KITCHEN WASTE UNDERGROUND	ALL	CELLULAR GLASS (FOAM GLASS)	2"	CELLULAR GLASS (FOAM GLASS) RIGID NON-COMPRESSIBLE WATERPROOF THERMAL INSULATION WITH WATERPROOF COVERING	HEAT TRACE
KITCHEN WASTE ABOVE GROUND	ALL	MINERAL FIBER, ASJ, SSL	1"	MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET	TYPE 1
CONDENSATE	ALL	MINERAL FIBER, ASJ, SSL	1/2"	MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET	TYPE 1
FLOOR DRAIN TRAP IN MECHANICAL ROOM	ALL	MINERAL FIBER, ASJ, SSL	1"	MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET	TYPE 1 INCLUDE 8' HORIZONTAL RUN
EXTERIOR PIPE	ALL	CELLULAR GLASS (FOAM GLASS)	2"	CELLULAR GLASS (FOAM GLASS)	ALUMINUM JACKET WITH HEAT TRACE

NOTES:
1. FIBERGLASS INSULATION: THERMAL CONDUCTIVITY .22 TO .28BTU x IN./H x FT x °F W/ 100°F MEAN TEMP. THICKNESS BASED ON ASHRAE 90.1, 1999 6.2.4.5

2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

3. ALL KITCHEN WASTE SHALL BE HEAT TRACED FROM FIXTURE TO THE GREASE INTERCEPTOR

PLUMBING FIXTURE/EQUIPMENT SCHEDULE

MARK	FIXTURE, MODEL NUMBER AND DESCRIPTION	ROUGH-IN WASTE/ SANITARY	ROUGH-IN VENT	ROUGH-IN CW	ROUGH-IN HW
W-1 W-1A	WATER CLOSET, WALL HUNG, W-1: STANDARD HEIGHT, W-1A: ADA (COMPLIANT WHEN PROPERLY INSTALLED AT MOUNTING HEIGHT). SLOAN WETS 2450.1401 ST-2459 & G2 8111-41.28 COMPLETE HET SYSTEM WITH EXPOSED BATTERY POWERED SENSOR FLUSHOMETER AND VITREOUS CHINA WALL HUNG FIXTURE. 1-1/2" TOP SPUD, SIPHON JET TOILET WITH WALL SUPPLY. CHURCH 295CT OPEN FRONT SEAT. PROVIDE ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION. 1.28 GALLON PER FLUSH	4"	2"	1"	--
W-2A	WATER CLOSET, WALL HUNG, ADA (COMPLIANT WHEN PROPERLY INSTALLED AT MOUNTING HEIGHT). SLOAN WETS 2050.1001-1.28, COMPLETE HET SYSTEM WITH EXPOSED MANUAL ROYAL FLUSHOMETER AND VITREOUS CHINA WALL HUNG FIXTURE. 1-1/2" TOP SPUD, SIPHON JET TOILET WITH WALL SUPPLY. CHURCH 295CT OPEN FRONT SEAT. PROVIDE ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION. 1.28 GALLON PER FLUSH	4"	2"	1"	--
U-1 U-1A	URINAL, SLOAN, WEUS-1000.1401-0.125 ECOS, WALL HUNG, U-1: STANDARD HEIGHT. U-1A: ADA (WHEN PROPERLY INSTALLED AT MOUNTING HEIGHT). COMPLETE SYSTEM WITH EXPOSED BATTERY POWERED SENSOR 1/8TH (.125) GPF FLUSH VALVE AND VITREOUS CHINA URINAL FIXTURE. 3/4" BACK SPUD INLET, WASHOUT URINAL WITH FULLY ENCLOSED P-TRAP. PROVIDE ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION.	2"	2"	3/4"	--
L-1A	LAVATORY, 20"x14" SELF RIMMING, SLOAN SS-3002-4" CENTERS, SLOAN OPTIMA PLUS FIBER OPTIC BATTERY POWERED SENSOR FAUCET EBF-187, PROVIDE WITH BELOW DECK 1070 MIXING VALVE (POWERS LFLM495). GRID DRAIN, 0.5 GPM FLOW RESTRICTOR. 1-1/2" CHROME PLATED CAST BRASS P-TRAP , SUPPLIES, BRASS ANGLE STOPS WITH LOOSE KEY OPERATION, ETC. FOR COMPLETE INSTALLATION. PROVIDE WITH TRUBRO INSULATION KIT. COORDINATE MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATION.	1-1/2"	1-1/2"	1/2"	1/2"
L-2A	LAVATORY, 20"x14" SELF RIMMING, SLOAN SS-3002-4" CENTERS, SYMMONS "SYMMETRIX" S-20-2-W-1.5. 6" SINGLE HANDLE FAUCET WITH POP UP DRAIN & LIFT ROD, 1.5 GPM FLOW RESTRICTOR . PROVIDE WITH BELOW DECK 1070 MIXING VALVE (POWERS LFLM495) 1-1/2" CHROME PLATED CAST BRASS P-TRAP , SUPPLIES, BRASS ANGLE STOPS WITH LOOSE KEY OPERATION, ETC. FOR COMPLETE INSTALLATION. PROVIDE WITH TRUBRO INSULATION KIT. COORDINATE MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATION.	1-1/2"	1-1/2"	1/2"	1/2"
S-1A	ADA-COMPLIANT, SINGLE COMPARTMENT, JUST SL-ADA-2133-A-GR TOP MOUNT, 2 FAUCET HOLES, 18-8 GA. TYPE 304 STAINLESS STEEL SINK, 21"x33" OD, WITH ONE (1) 28"x16"x6-1/2" BASIN WITH 1X 3-1/2" OFF- CENTERED REAR DRAIN LOCATIONS. , PROVIDE WITH DRAIN J-35. ANGLE STOPS & SUPPLIES (CHOME PLATED METAL); PROVIDE ASTM E84 COMPLIANT INSULATION KIT FOR EXPOSED SUPPLIES AND WASTE PIPING BELOW SINK (IPS SOFTGUARD PLUS OR PLUMBEREX SPECIALTY HANDYSHIELD MAXX). FAUCET: T&S BRASS B-2866, 8" CENTERS CHROME FINISH, 1.5 GPM, TWO HANDLE WRIST BLADE 4" ON CENTER.	1-1/2"	1-1/2"	1/2"	1/2"
DF-1A	BI-LEVEL DRINKING FOUNTAIN, ELKAY: EDFP217C, ADA-COMPLIANT WHEN PROPERLY INSTALLED (REFER TO MANUFACTURERS INSTALLATION REQUIREMENTS), NSF/ANSI 61 CERTIFIED, BI-LEVEL #18 GAUGE 304 STAINLESS STEEL. FLEXI-GUARD, FULLY ASSEMBLED FRONT PUSH-BUTTONS, FLOW REGULATOR (20 TO 105 PSI), AND DRAIN, TRAP ASSEMBLIES AND VANDAL-RESISTANT BOTTOM COVER PLATES., PROVIDE WITH IN WALL CARRIER MOUNTING PLATE MPW200.	1-1/2"	1-1/2"	1/2"	--
M1	MOP SINK, FIAT MSB2424, MOLDED STONE, 24x24x12, SERVICE FAUCET PLATE #830-AA, HOSE AND HOSE BRACKET PLATE #832- AA, BUMPER GUARD PLATE #E-77-AA, SS MOP HANGER #889-CC, MOP SINK DRAIN GASKET #QDC3XH, WALL GUARDS #MSG24, WITH INTEGRAL DRAIN. PROVIDE TRAP, SUPPLIES, STOPS, ETC FOR COMPLETE INSTALLATION.	3"	2"	3/4"	3/4"
SH-1A	ADA ENCLOSURE: AQUARIUS, # S 4136 BF OT, ONE-PIECE ACRYLIC SHOWER ENCLOSURE, 1/2" THRESHOLD, OPEN TOP, 41.5" X 37.5" X 75.75"H O.D., 36" X 36" HIGH I.D.; 24" VERTICAL AND 18" X 32.5" HORIZONTAL 'L' GRAB BARS, 1-1/2" DIA.; 1" DIA. S.S CURTAIN ROD; GREEN ANTI-BACTERIAL CURTAIN WITH HOOKS; FACTORY-INSTALLED HDPE FOLD-UP SEAT, MOLDED ACCESSORY SHELF. INSTALL PER MANUFACTURES REQUIREMENTS. FRONT EDGES OF ENCLOSURE SHALL HAVE INTEGRALLY- MOLDED WALL OVERLAP FOR NEAT AND FINISHED APPEARANCE. CENTERED DRAIN. DRAIN: TYPE 2"FD-3 (REFER TO DRAIN SCHEDULE). CONTROLS: SYMMONS TEMPTROL, C-96-500-B30-V-1.5, COMMERCIAL SHOWER/HAND SHOWER SYSTEM WITH LEVER HANDLE, PRESSURE BALANCING MIXING VALVE WITH ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN. SEPARATE DUAL OUTLET LEVERTROL DIVERTER VALVE. SHOWERHEAD #4-137 WITH CAST BRASS SINGLE MODE ADJUSTABLE SPRAY. SHOWERHEAD MOUNTING BRACKET AND FLANGE. WALL/HAND SHOWER, #EF-100 WITH 5 FOOT FLEXIBLE METAL HOSE, IN-LINE VACUUM BREAKER AND WALL CONNECTION. 30 INCH SLIDE BAR FOR MOUNTING HAND SHOWER. 1.5 GPM FLOW RATE RESTRICTOR.	2"	2"	1/2"	1/2"
SH-2	DRAIN: TYPE 2"FD-3 (REFER TO DRAIN SCHEDULE). CONTROLS: SYMMONS TEMPTROL, **S-96-300-B30-L-V**, 2.5 GPM COMMERCIAL HAND SHOWER SYSTEM WITH LEVER HANDLE, PRESSURE BALANCING MIXING VALVE WITH ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN. WALL/HAND SHOWER, #T-300-V AND A 5 FOOT FL EXIBLE METAL HOSE WITH IN-LINE VACUUM BREAKER, WALL CONNECTION AND FL ANGE, 30 INCH SLIDE BAR FOR HAND SHOWER MOUNTING	2"	2"	1/2"	1/2"
EEW	BRADLEY S19-220BF, ADA-COMPLIANT, WITH 10" DIAMETER STAINLESS STEEL BOWL, CHROME-PLATED BRASS TWIN SPRAYHEAD ASSEMBLY WITH PROTECTIVE COVERS. INTEGRAL 1-1/4" DRAIN FITTING, WALL TUBE AND P-TRAP. PROVIDE THERMOSTATIC MIXING VALVE TMV2 FOR EMERGENCY EYEWASH, LOCATED ADJACENT IN LOCKING SURFACE MOUNTED STAINLESS STEEL WALL CABINET. TMV-2: COLD WATER BYPASS, POSITIVE SHUTOFF ON HOT SUPPLY WHEN COLD SUPPLY IS LOST; LIQUID-FILLED TSTAT, DIAL THERMOMETER; FACTORY-PIPED AND TESTED. SET DISCHARGE TO 85°F. LEAD FREE. SURFACE MOUNTED CABINET.	1-1/2"	1-1/2"	1/2"	1/2"
HB	HOSE BIBB (UNFINISHED AREAS), WOODFORD MODEL 24, BRONZE BODY CHROME PLATED, REMOVABLE VALVE SEAT & STEM ASSEMBLY, THREADED END, INTEGRAL VACUUM BREAKER	--	--	3/4"	--
FPHB	FREEZE PROOF HOSE BIBB, WOODFORD MODEL MB67, CAST BRONZE NON-FREEZE WALL HYDRANT WITH STAINLESS STEEL HINGED LOCKING COVER, 3/4"HPT OUTLEST, INTERGRAL DOUBLE CHECK BACKFLOW PREVENTER PRESSURE RELIEF VALVE, AND 3/4" FEMALE & 1" MALE NPT INLER CONNECTION	--	--	3/4"	--
HR-1	HOSE REEL & VALVE ASSEMBLY, T&S BRASS MODEL B-1433-7212-01, WITH CONTINUOUS PRESSURE VACUUM BREAKER WITH INTEGRAL CHECK VALVE, 36" FLEX CONNECTOR TO HOSE REEL, 15' 3/8" HOSE REEL, HIGH FLOW SPRAY VALVE, QUICK DISCONNECT BETWEEN REEL & FLEX CONNECTOR, 8" WALL MOUNT MIXING FAUCET WITH SPRING CHECKS & LEVER HANDLES (COLOR CODED).	--	--	1/2"	1/2"
HR-2	POWDER COATED RETRACTABLE HOSE REEL, LINCOLN (OR SIMILAR MANUFACTURER) MODEL 84673, EXTRA HEAVY DUTY HOSE REEL, 3/4" X 75' INDUSTRIAL GRADE HOSE RATED TO 2000 PSI. RATCHETING SYSTEM HOLDS THE LENGTH OF HOSE UNTIL A SLIGHT TUG TO RETRACT AUTOMATICALLY. 3/4" NPT FEMALE INLET, ADJUSTABLE HOSE BUMPER. PROVIDE WITH MOUNTING BRACKET. STAINLESS STEEL WATER GUN, T&S BRASS MODEL MV-2522-34, FRONT TRIGGER, 7/16" FLOW ORIFICE, RUBBER COVER. PROVIDE SHUT OFF VALVE AND VACUUM BREAKER ON INLET OF HOSE REEL ASSEMBLY.	--	--	3/4"	--
WS-1	WASHDOWN STATION, **T&S BRASS MODEL** MV-0771-12N-BVT, 3/4" NPT H&CW INLETS, NATURAL FINISH WASHDOWN STATION W/BALL VALVES, CHECK VALVES, THERMOMETER, HOSE SWIVEL AND STAINLESS STEEL HOSE RACK.	--	--	3/4"	3/4"
CA1	COMPRESSED AIR OUTLET HOSE REEL ASSEMBLY - APPARATUS BAYS. 3/4" DROP TO HOSE REEL LEVEL, WITH SHUTOFF AND THREADED CAP AT BASE; 3/4" TO HOSE REEL (MOUNTED TO UNDERSIDE OF DUCT WITH METAL FRAMING SYSTEM); HOSE REEL/HOSE: REELCRAFT MODEL #RT835-OLP, MULTI-POSITION, SPRING RETRACTABLE, 1/2" REEL INLET, WITH 35 FT OF 300 PSI 1/2" HOSELEFT BLANK INTENTIONALLY	--	--	--	--
CA2	COMPRESSED AIR OUTLET ASSEMBLY - APPARATUS BAYS. 1/2" RIGID PIPE DROP TO CA-2 ASSEMBLY CONSISTING OF: SHUTOFFS BALL VALVES, PRESSURE REGULATOR, PRESSURE GAUGE AND QUICK CONNECT COUPLING. PROVIDE ADDITIONAL 35 FT OF 300 PSI 1/2" "FREE HOSE" WITH QUICK CONNECT COUPLINGS FOR FIRE DEPT'S PNEUMATIC EQUIPMENT / TOOLS.	--	--	--	--
TP-1	PRESSURE DROP ACTIVATED TRAP PRIMER, PRECISION PLUMBING PRODUCTS (PPP.) P-1 / P-2 WITH DU-4 DISTRIBUTION UNIT. SURFACE OR RECESSED CABINET BASED ON WALL CONDITIONS (REFER TO DWGS.) COORDINATE ACCESS PANEL FINISH WITH ARCHITECT. COORDINATE NUMBER OF OUTLETS AS REQUIRED BY QUANTITY OF DRAINS. INSTALL PER MANUFACTURERS REQUIREMENTS AND RECOMMENDATIONS	--	--	3/4"	--
WT	WASHER TRIM, PRECISION PLUMBING PRODUCTS MM-500 MLB, 20 GAUGE STEEL LAUNDRY BOX WITH WHITE POWDER COAT FINISH, QUARTER TURN BALL VALVES & INTEGRAL WATER HAMMER ARRESTORS	2"	2"	1/2"	1/2"
KITCHEN WASTE ELECTRIC HEAT TRACE	ELECTRIC HEAT TRACE, RAYCHEM, 12XL-CT SERIES 8W/FT, 20A BREAKER, 208V, UL LISTED SYSTEM WITH (2) 16AWG COPPER BUS WIRES ENCLOSED IN A PARALLEL, IN A POLYMER CORE. THE SYSTEM SHALL INCLUDE ALL POWER CONNECTIONS, SEALS, SPLICES, TEE KITS AND FASTENING HARDWARE. CONTROLS SHALL BE THERMOSTATIC AMBIENT SENSING, CONTROLLER: EC-TS, AND ALL HEAT TRACE SHALL MAINTAIN 110°F WITH A 50°F AMBIENT TEMPERATURE, SET TO 110°F. PROVIDE (2) PARALLEL HEAT TRACE LINES ALONG ALL PIPING , (1) ACTIVE AND (1) FOR SPARE. COORDINATE WITH ELECTRICAL CONTRACTOR AND MANUFACTURES REQUIREMENTS AND RECOMMENDATIONS				

NOTES:
1. LAVATORY & DRINKING FOUNTAIN SUPPLY SHALL BE BRASS W/ BRASS ANGLE STOPS FOR 1/2" WATER SUPPLY LINES, W/ LOOSE KEY (W/CAP), AND WALL FLANGE. ALL COMPONENTS SHALL BE POLISHED CHROME FINISH. MANUFACTURER: BRASS CRAFT OR APPROVED EQUAL.
2. CAST BODY "P" TRAP 1-1/2" x 1-1/2" WITH HEAVY CAST J-BEND & FLAT CLEANOUT PLUG, SLIP NUTS AND WALL FLANGE. ALL COMPONENTS SHALL BE POLISHED CHROME FINISH. MANUFACTURER: BRASS CRAFT OR APPROVED EQUAL.
3. STRAINERS SHALL BE FURNISHED WITH FIXTURES AS REQUIRED. FOR H/C LAVATORY OR SINKS PROVIDE OFFSET TAILPIECE.
4. PROVIDE TRUEBRO MODEL 103 (WHITE), ANTIMICROBAL HANDI LAV-GUARDS INSTALLATION KIT FOR ALL WHEELCHAIR LAVATORY & SINKS FOR WATER SUPPLIES & WASTE LINE.
5. PROVIDE WATER SUPPLY & "P" TRAP & OPTIONAL WATER FILTERS FOR DRINKING FOUNTAINS AS PER MANUFACTURERS RECOMMENDATIONS.
6. THE PLUMBING FIXTURES VENDOR SHALL COORDINATE WITH THE PLUMBING AND GENERAL CONTRACTOR ALL PLUMBING FIXTURES ROUGH IN DIMENSIONS BEFORE CONSTRUCTION BEGIN.
7. UNLESS SHOWN ABOVE, PLUMBING FIXTURES MANUFACTURER, TRIM COLOR AND FINISH SHALL BE FURNISHED AS DIRECTED BY OWNER/ARCHITECT.
8. REFER TO ARCHITECTURAL DRAWINGS FOR STANDARD, A.D.A MOUNTING AND CHILD HEIGHTS. REFER TO ARCHITECTURAL FOR LOCATION OF A.D.A COMPLIANT SHOWER SEAT AND SHOWER BARS
9. CONTRACTOR TO PROVIDE AN EXTRA 10% OF BATTERIES, AERATORS, CARTRIDGE, ETC...

LEAK DETECTION

SS-1: WATER LEAK DETECTOR. UNIT SHALL HAVE GOLD PLATED ADJUSTABLE SENSING PROBES TO DETECT WATER FROM 0 TO 1/8 INCH ABOVE SURFACE. ALL ELECTRONIC CIRCUITRY SHALL BE ENCAPSULATED IN EPOXY TO PROTECT FROM DIRT, FUNGUS AND SHORT TERM IMMERSION IN WATER. UNIT SHALL PROVIDE 85DB WATER LEAK ALARM WHEN ACTIVATED AND HAVE A MINIMUM 1.5 DAY ALARM DURATION WHEN BATTERY POWERED. UNIT SHALL BE POWERED WITH A 12-24V AC OR DC SEPARATE VOLTAGE MODULE. UNIT SHALL BE ABLE TO ACCEPT AND MONITOR 1 OR 2 LENGTHS OF WATER LEAK DETECTION CABLE VIA LOCKING PLUG-IN CONNECTORS. UNIT SHALL INCLUDE REMOTE ALARM WITH 50' OF INTERCONNECT CABLE. REMOTE ALARM SHALL BE SURFACE WALL MOUNTED AND CONTAIN 85DB ALARM W/ SILENCE SWITCH AND 10MM LED LAMP. LOCATE REMOTE ALARM IN THE APPARATUS BAY OR PER FIRE DEPARTMENTS PREFERENCE, COORDINATE LOCATION PRIOR TO INSTALLATION. ALL INSTALLATION / OPERATION MANUALS AND WARRANTY TO BE INCLUDED WITH UNIT. 5 YEAR

PS-3 POWER SUPPLY. THE UNIT SHALL PROVIDE POWER, 9VDC. UNIT SHALL HAVE INTERNAL BATTERY BACK-UP TO POWER THE DETECTORS FOR UP TO 4 DAYS WITHOUT AC POWER. UNIT SHALL BE BENCH MOUNTED AND PLUG-IN TO 110-120VAC OUTLET. OVER VOLTAGE AND SHORT CIRCUIT PROTECTED. ALL INSTALLATION / OPERATION MANUALS AND WARRANTY TO BE INCLUDED WITH UNIT. 5 YEAR WARRANTY MINIMUM. UNIT SHALL BE PROVIDED BY DORLEN PRODUCTS INC. MILWAUKEE, WI.

VM-1 VOLTAGE MODULE UNIT SHALL INSTALL IN ANY WATER ALERT DETECTOR AND ACCEPT 12 THRU 24 VOLTS AC OR DC TO POWER THE WATER ALERT. THE UNIT ELIMINATES THE NEED FOR BATTERIES IN THE WATER ALERT. ALL INSTALLATION / OPERATION MANUALS AND WARRANTY TO BE INCLUDED WITH UNIT. 5 YEAR WARRANTY MINIMUM. UNIT SHALL BE PROVIDED BY DORLEN PRODUCTS INC. MILWAUKEE, WI.

GAS WATER HEATER SCHEDULE

MARK	MAKE & MODEL	TYPE	STORAGE	RECOVERY @ TEMP. RISE	MIXING VALVE	GAS PRESSURE	GAS INPUT (MBH)	REMARKS
WH-1	A.O. SMITH BTH-199(A)	GAS	100	235 GPH @ 100°F	TMV-1	4.4" WC - 14" WC	199,900	WITH CNP-1

NOTES:
1. INSTALL WATER HEATER IN ACCORDANCE WITH BUILDING CODE - PLUMBING & MECHANICAL (WITH LATEST AMENDMENTS) CODES,ENERGY CODE, AND APPLICABLE STANDARDS AND MANUFACTURERS RECOMMENDATIONS.

2. PROVIDE BRASS DRAIN VALVE, & ALL REQUIRED OPTIONS TO COMPLETE THE INSTALLATION.

EXPANSION TANK SCHEDULE

MARK	MAKE & MODEL	SERVICE	WATER HEATER STORAGE CAPACITY (GALLONS)	* REQUIRED MINIMUM VOLUME (GALLONS)
EXP-1	AMTROL ST-20VC	WH-1	100	8

* BASED OFF 1.5% EXPANSION FACTOR: 140°F HOT WATER STORAGE TEMPERATURE, & 5.7 DESIGN PRESSURE FACTOR : 100 PSI MAXIMUM ALLOWABLE PRESSURE & 80 PSI LINE PRESSURE. (WATER HEATER VOLUME x 1 . 5 % x 5 . 7).

NOTES:
1. ASME CONSTRUCTION SHALL BE STANDARD
2. PROVIDE ALL NECESSARY ACCESSORIES.
3. PROVIDE AIR CHARGING FITTING

THERMOSTATIC MIXING VALVE SCHEDULE

MARK	EQUIPMENT BEING SERVED (I.E. WATER HEATER, ETC...)	AREA SERVED	PRESSURE DIFFERENTAL	MINIMUM FLOW RATE GPM*	MINIMUM FLOW RATE GPM	INLET TEMPERATURE	OUTLET TEMPERATURE	MANUFACTURER / MODEL
TMV-1	WH-1	BLDG	30 GPM @ 10 PSI	0.5	4	140	120	POWERS / LFMM432
TMV-2	EEW	DECON	3 GPM @ 10 PSI	NA	3	120	85	LAWLER / 911E/F 84909
TMV-3	HAND SINK	KITCHEN	5.7 GPM @ 10 PSI	NA	0.5	140	105	POWERS / LFLM495-1

NOTES:
1. *MINIMUM LOW RATE WHEN VALVE IS INSTALLED AT OR NEAR HOT WATER SOURCE WITH RECIRCULATED TEMPERED WATER AND CONTINUOUSLY OPERATING CIRCULATION PUMP.

2. WITH DIAL THERMOMETER, ADJUSTABLE SET POINT, INTEGRAL STRAINER CHECKSTOPS ON INLETS, PROVIDE SHUTOFFS/UNIONS AT ALL CONNECTIONS

PUMP SCHEDULE

MARK	LOCATION	SERVICE	PUMP TYPE	FLUID	GPM	HEAD	ELECTRICAL HP	ELECTRICAL VOLTAGE	ELECTRICAL PHASE	ELECTRICAL RPM	MANUFACTURER / MODEL	REMARKS
RP-1	MEZZANINE	120°F HWC	CARTRIDGE CIRCULATOR	WATER	3	3	1/40	115	1	3250	TACO / 003-SC4-1	--
RP-2	MEZZANINE	140°F HWC	CARTRIDGE CIRCULATOR	WATER	3	3	1/40	115	1	3250	TACO / 003-SC4-1	--
CNP-1	CUSTODIAL 123	WH-1 CONDENSATE	RESERVOIR PUMP	CONDENSATE	5	20	1/3	110	1	--	AXIOM / NT25-P	CONDENSATE NEUTRALIZER WITH RESERVOIR PUMP
BP-1	WATER SERVICE ROOM	DOMESTIC WATER	VERTICAL MULTI SPEED	WATER	60 GPM EACH (QTY 2X)	127 (55 PSI) EACH (QTY 2X)	3 HP EACH (QTY 2X)	208	3	3600	ARMSTRONG / SERIES: 6800 MODEL: N230402-3	DUPLEX PREPACKAGED BOOSTER SYSTEM. TOTAL PLANT = 120 GPM @ 127 ' (55 PSI)

DRAIN SCHEDULE

MARK	FIXTURE, MODEL NUMBER AND DESCRIPTION	ROUGH-IN TRAP	ROUGH-IN WASTE	ROUGH-IN VENT
FD-1	FLOOR DRAIN (MECHANICAL ROOM). WATTS FD-320-Y, HEAVY DUTY CAST IRON BODY, BOTTOM OUTLET. 9" DIAMETER CAST IRON TOP, TRAP PRIMER CONNECTION, SEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.
FD-2	FLOOR DRAIN (TOILET ROOM). WATTS FD-1100-A5, HEAVY DUTY CAST IRON BODY, BOTTOM OUTLET. 6"X6" SQUARE NCKEL BRONZE TOP, TRAP PRIMER CONNECTION, SEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.
FD-3	SHOWER DRAIN (SHOWER ENCLOSURE). WATTS FD-100-A5-7, HEAVY DUTY CAST IRON BODY, BOTTOM OUTLET. 5" DIAMETER NICKELBRONZE TOP, TRAP PRIMER CONNECTION, SEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP. SEE NOTE 2	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.
FD-4	FLOOR DRAIN (KITCHEN). WATTS FD-1100-B-4-P-B6-5, 14 GAUGE 304 STAINLESS STEEL, EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, REVERSIBLE CLAMPING COLLAR WITH PRIMARY AND SECONDARY WEEPHOLES, ADJUSTABLE HEAVY DUTY ROUND HEEL PROOF 6" STAINLESS STEEL STRAINER, SEDIMENT BUCKET, PUSH ON OUTLET,	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.
FD-5	FLOOR SINK (KITCHEN). WATTS FS-780-(3 or 4) -P-FC-5, 14 GAUGE 304 STAINLESS STEEL, BOTTOM OUTLET. 12"X12"X6" DEEP, CAST STAINLESS STEEL GRATE, DOME BOTTOM STRAINER, SEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP STAINLESS STEEL SEDIMENT BUCKET, PUSH ON OUTLET, COORDINATE GRATE FOR INDIRECT WASTE CONNECTIONS PRIOR TO ORDERING	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.
FD-6	FLOOR DRAIN (DECON). WATTS FD-1160 SERIES, CHEMICAL RESISTANT PVC, BOTTOM OUTLET. 6-1/2" ROUND HEEL PROOF ADJUSTABLE PVC STRAINER SECURED WITH STAINLESS STEEL SCREWS AND SOCKET OUTLET SEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP STAINLESS STEEL SEDIMENT BUCKET. TRAP PRIMER TAPPED.	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.
TD-1	WATTS DEAD LEVEL D SERIES, 6" WIDE UV-STABILIZED, CHEMICAL-RESISTANT, INJECTION-MOLDED POLYPROPYLENE 0.7% SLOPED TRENCH DRAIN WITH DUCTILE IRON FRAME AND 'DI-ADA' DUCTILE IRON ADA-COMPLIANT GRATE, LOAD CLASS F. TD-1 INSTALLATION SHALL BE 76 FT. LONG TOTAL, CONSISTING OF: (19) 4-FT LOCKING SLOPED SECTIONS: [DI-1A THRU DI-4D] PROVIDE HIGH/LOW END CAPS, OILY WASTE PIPING SHALL CONNECT TO THE OUTLET OF TD-1'S LOW-END SECTION. (ALTERNATE #2 LENGTH TO BE ##) MANUFACTURER SHALL FURNISH COMPLETE WITH MOLDED CONSTRUCTION COVERS. CONTRACTOR SHALL COORDINATE PROVISION AND INSTALLATION OF ALL CONCRETE CONTROL JOINTS AT ALL TRENCH DRAINS (TD-1) WITH MANUFACTURER'S RECOMMENDATIONS AND STRUCTURAL ENGINEER'S REQUIREMENTS.	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.	AS NOTED ON DRWGS.

NOTES:
1. PROVIDE TRAP PRIMERS FOR ALL DRAINS. DRAINS INCORPORATING A CONSTANT AND REGULAR WASTE ARE NOT REQUIRED TO INTERGRATE TRAP PRIMERS (I.E. SHOWER DRAINS, KITCHEN DRAINS, ETC).

2.TRANSITION COUPLINGS AND NO-HUB PIPE SHALL NOT BE INSTALLED BELOW SLAB OR IN ANY BURIED CONDITIONS IN CONTACT WITH EARTH. PROVIDE PUSH ON OR INSIDE CAULK OUTLETS.

CLEANOUT SCHEDULE

MARK	FIXTURE, MODEL NUMBER AND DESCRIPTION	TRAP SIZE	REMARKS
FCO	FLOOR CLEANOUT (ALL INTERIOR AREAS EXCEPT CARPETED AREAS). WATTS CO-200-RX-C-6, ADJUSTABLE ROUND SCORIATED HEAVY DUTY NICKEL BRONZE SECURED TOP WITH FRAME, CAST IRON BODY, FLASHING FLANGE AND CLAMP, BRONZE PLUG. PROVIDE WITH VANDAL PROOF SCREWS. PROVIDE NICKEL BRONZE FRAME IN WET AREAS.	AS NOTED ON DWG.	--
FCO	FLOOR CLEANOUT (CARPETED AREAS). WATTS CO-200-RC-6, ADJUSTABLE ROUND SCORIATED HEAVY DUTY NICKEL BRONZE SECURED TOP WITH FRAME, CARPET MARKER, CAST IRON BODY, FLASHING FLANGE AND CLAMP, BRONZE PLUG. PROVIDE WITH VANDAL PROOF SCREWS.	AS NOTED ON DWG.	--
YCO	FLOOR CLEANOUT (EXTERIOR AREAS). WATTS CO-300-MF-6 WITH CO-380 ROUND FLANGED HOUSING WITH HEAVY DUTY SCORIATED DUCTILE IRON TOP, CLEANOUT FERRULE BODY WITH BRONZE PLUG. INSTALL CLEANOTUS WITH 18"SQUARE X 6" DEEP CONCRETE APRON IN NON-PAVED AREAS. PROVIDE WITH VANDAL PROOF SCREWS.	AS NOTED ON DWG.	--
WCO	WALL PLATE CLEANOUT COVER. WATTS CO-300-S7-6, PROVIDE AT CAST IRON CLEANOUTS WITH TAPERED BRONZE PLUG A 6"X6" (OR 7"X7") POLISHED NICKEL SQUARE FRAME AND COVER SECURED WITH VANDAL PROOF SCREWS.	--	--

NOTES:
1. TRANSITION COUPLINGS AND NO-HUB PIPE SHALL NOT BE INSTALLED BELOW SLAB OR IN ANY BURIED CONDITIONS IN CONTACT WITH EARTH

2. PROVIDE ALL POURED IN PLACE CLEANOUTS WITH 24"X24" FLASHING

Project Title:
Town of North Stonington
New Center for Emergency Services
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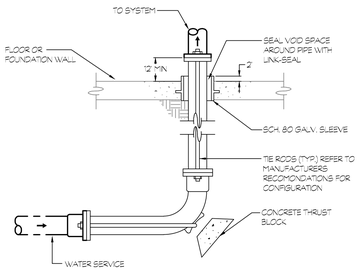
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REV 1	100% CD Submission	1/5/17	
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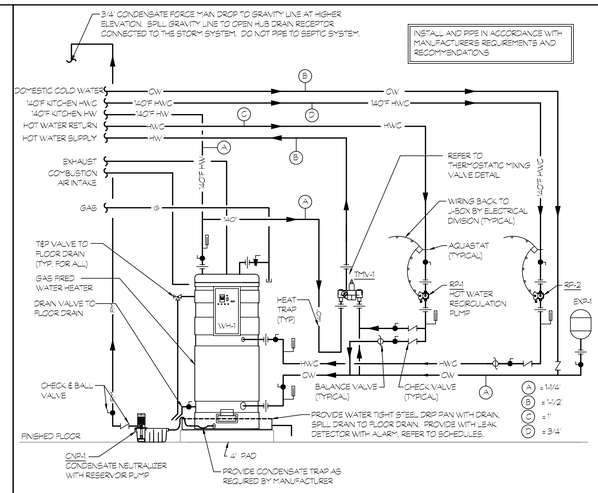
Drawing Title: SCHEDULES - PLUMBING

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: MPB
Project Number: 13.220
Drawing Number: P400



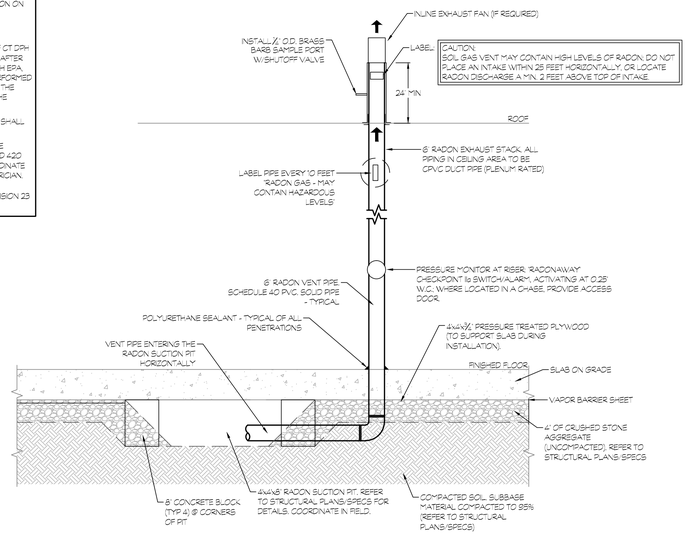
WATER SERVICE ENTRY DETAIL
NOT TO SCALE



GAS FIRED WATER HEATER PIPING DETAIL
NOT TO SCALE

RADON SYSTEM GENERAL NOTES:

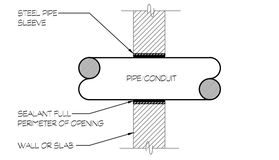
1. RADON SUCTION PIPE SHALL BE CENTRALLY LOCATED AS SHOWN.
2. DO NOT LOCATE SUCTION PIT NEAR SUBSLAB BARRIERS OR NEAR UNSEALED OPENINGS THROUGH THE SLAB.
3. VENT PIPE SHALL ENTER THE RADON SUCTION PIT HORIZONTALLY.
4. RUN VENT PIPE UNDER THE SLAB AND EXIT THE SUBSLAB IN THE GENERAL LOCATION INDICATED ON THE PLANS.
5. PROVIDE PRESSURE MONITOR/WARNING SIGNAL AT RISER, WHERE LOCATED IN A CHASE, PROVIDE AN ACCESS DOOR.
6. HORIZONTAL PIPE RUNS IN THE CEILING MUST PITCH A MINIMUM OF ¼" PER FOOT BACK TO THE RADON SUCTION PIT.
7. ALL PVC PIPING SECTIONS TO BE CONNECTED USING PVC CEMENT (LOW VOCS).
8. REFER TO OTHER DISCIPLINES DRAWINGS FOR ANY ADDITIONAL INFORMATION ON THE RADON SYSTEM INSTALLATION REQUIREMENTS.
9. CONTRACTOR SHALL PROVIDE THE SERVICES OF A RADON TESTING PROFESSIONAL WHO IS QUALIFIED FOR RADON TESTING IN CONNECTICUT SCHOOLS (LIST OF QUALIFIED PROFESSIONALS IS AVAILABLE ON STATE OF CT DPH WEBSITE) TO TEST RADON LEVELS AND PRESSURE FIELD EXTENSION (PFE) AFTER COMPLETION OF RADON SYSTEM INSTALLATION AND IN ACCORDANCE WITH EPA STATE AND LOCAL REGULATIONS AND GUIDELINES. TESTING SHALL BE PERFORMED AFTER COMPLETION OF PASSIVE RADON EXHAUST SYSTEM INSTALLATION. THE TESTING PROFESSIONAL SHALL SUBMIT A WRITTEN REPORT CONTAINING THE RESULTS.
10. IF LEVELS ARE FOUND TO BE HIGH AFTER TESTING IS COMPLETED, SYSTEM SHALL BE CONVERTED FROM A PASSIVE SYSTEM TO AN ACTIVE SYSTEM.
    - 10.a. INLINE RADON EXHAUST FAN MOUNTED IN RADON VENT STACK, ABOVE RADON VENT ROOF PENETRATION. RADONAWAY MODEL RP380 RATED 420 CFM AT 0" ESP (TESTED WITH 6" INLET AND DISCHARGE PIPING). COORDINATE PROVISION OF POWER WIRING AND DISCONNECT SWITCH WITH ELECTRICIAN. FAN IS TO RUN CONTINUOUSLY.
    - 10.b. COORDINATE WIRING OF PRESSURE MONITOR INTO BMS. REFER TO DIVISION 23 SPECS FOR MORE INFORMATION.



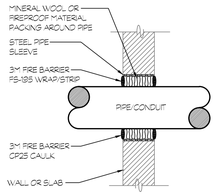
NOTE:
WHERE PIPE ENTS FLOOR SLAB VERTICALLY TO 6-INCH EXHAUST STACK AND FAN, PIPE SHALL BE SOLID. REFER TO DETAIL FOR VERTICAL PIPE, ABOVE SLAB.

NOTE: PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL WORK RELATED TO THE RADON MITIGATION SYSTEM, AS DETAILED ON THE PLUMBING DRAWINGS AND SPECIFIED IN SPECIFICATION DIVISION 31 SECTION "RADON MITIGATION"

TYPICAL (RADON) SUBSLAB DEPRESSURIZATION DETAIL
NOT TO SCALE



SLEEVES AT NON-RATED WALLS



SLEEVES AT RATED WALLS

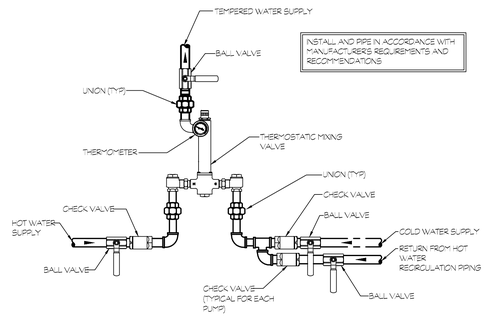
GENERAL NOTES:

PROVIDE UL LISTED, FM APPROVED FIRE/SMOKE PENETRATION ASSEMBLIES IN ACCORDANCE WITH UL1479, ASTM E84 REQUIREMENTS FOR WALL TYPE, RATING AND PIPE SIZES.

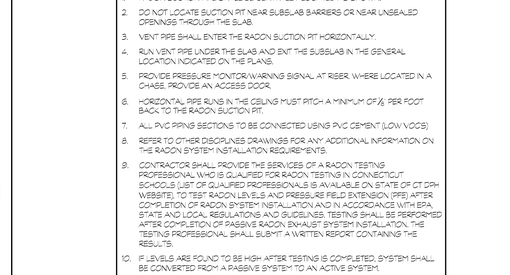
FIRE STOPPING SHALL HAVE A RATING EQUAL TO OR GREATER THAN THE WALL BEING PENETRATED. REFER TO ARCHITECTURAL DRAWINGS FOR WALL RATINGS.

FOR WALL PENETRATIONS AT RATED WALLS SEE SPECIFICATION SECTIONS "SEALANTS" AND "FIRESTOPPING"

PIPE PENETRATION DETAIL
NOT TO SCALE



THERMOSTATIC MIXING VALVE DETAIL
NOT TO SCALE

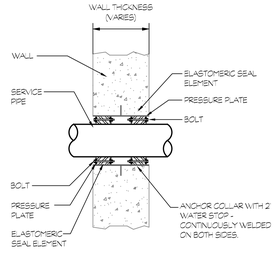


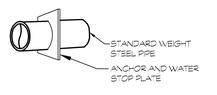
POINT OF USE THERMOSTATIC MIXING VALVE DETAIL
NOT TO SCALE

NOTE: DO NOT PROCEED UNTIL SERVICE DROPS HAVE BEEN FULLY COORDINATED WITH WORK OF ALL OTHER TRADES IN THE AREA, INCLUDING GENERATION AND APPROVAL OF COORDINATION DRAWINGS

COORDINATE THE EXACT LOCATION OF THE UTILITY DROPS, OUTLETS AND HOSE REEL LOCATIONS WITH THE FIRE DEPARTMENT AND BUILDING COMMITTEE PRIOR TO INSTALLATION. THIS IS TYPICAL FOR ALL COMPRESSED AIR AND WATER SERVICES.

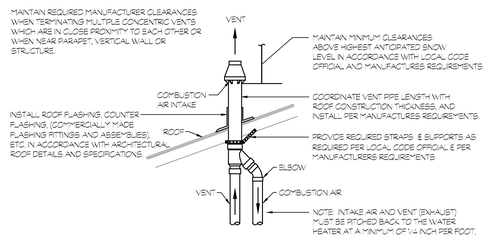
CA-1 TYPICAL COMPRESSED AIR HOSE REEL
NOT TO SCALE





NOTE:
PROVIDE PROPER SUPPORT OF BURIED PIPING, INCLUDING, BUT NOT LIMITED TO, BEDDING, COMPACTION, SUPPORT TO PREVENT PIPE MOVEMENT. PROVIDE PIPE WITH SWING JOINT FITTING.

EXTERIOR PIPE PENETRATION WITH SLEEVE DETAIL
NOT TO SCALE



CONCENTRIC VENT VERTICAL TERMINATION DETAIL
NOT TO SCALE

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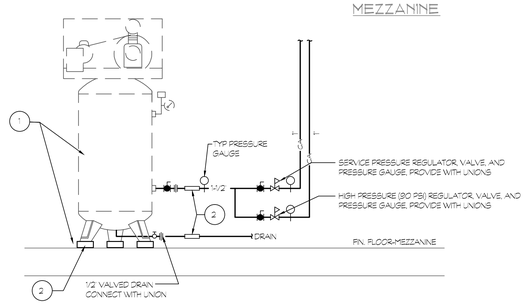
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
DETAILS - PLUMBING

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: MPB
Project Number: 13.220

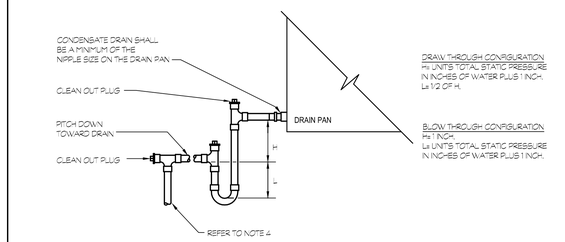
Drawing Number: P500



1. EXISTING AIR COMPRESSOR PROVIDED BY THE OWNER. SEISMICALLY RESTRAIN RECEIVER/COMPRESSOR TO MEZZANINE STRUCTURE WITH HOUSED OR OPEN SPRING ISOLATION MOUNTS (REFER TO SPECIFICATIONS).
2. PROVIDE VIBRATION ISOLATION ON AIR COMPRESSOR, PIPING, EQUIPMENT ETC. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

AIR COMPRESSOR ACCESSORIES DETAIL

NOT TO SCALE



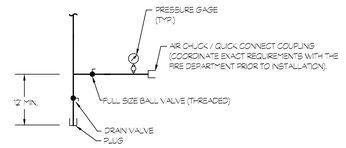
NOTES:

1. REFER TO MECHANICAL FLOOR PLANS AND SCHEDULES TO DETERMINE UNIT'S CONFIGURATION.
2. REFER TO MECHANICAL SCHEDULES FOR UNIT'S TOTAL STATIC PRESSURES.
3. MANUALLY PRIME TRAP PRIOR TO START-UP OF UNIT.
4. UNITS ABOVE CEILINGS: DRAIN PIPING SHALL BE INSULATED AND PIPED TO THE DISCHARGE POINT INDICATED WITH AN AIR GAP OF 2 TIMES THE CONDENSATE DRAIN SIZE.
5. UNITS ON ROOFS: DRAIN PIPING SHALL BE PIPED TO ROOF DRAIN. SPLASH BLOCK (BY THIS DIVISION) OR LOCATED INSIDE BUILDING.
6. UNITS INSIDE BUILDING: DRAIN PIPING SHALL BE INSULATED AND PIPED TO THE DISCHARGE POINT INDICATED WITH AN AIR GAP OF 2 TIMES THE CONDENSATE DRAIN SIZE.

COOLING COIL DRAIN TRAP DETAIL

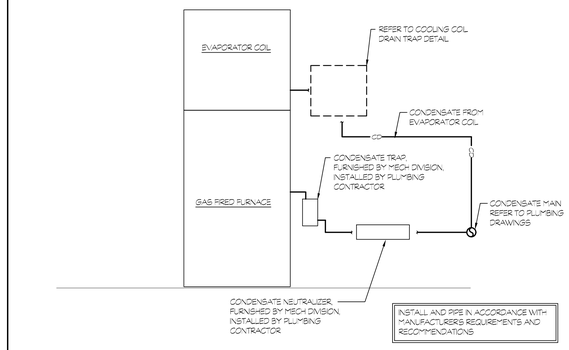
NOT TO SCALE

COMPRESSED AIR OUTLET ASSEMBLY - APPARATUS BAYS. 1/2" RIGID PIPE DROP. PROVIDE ADDITIONAL 35 FT OF 300 PSI 1/2" FREE HOSE WITH QUICK CONNECT COUPLINGS FOR FIRE DEPT'S PNEUMATIC EQUIPMENT / TOOLS (COORDINATE EXACT REQUIREMENTS WITH THE FIRE DEPARTMENT PRIOR TO INSTALLATION).



CA-2 TYPICAL COMPRESSED AIR SERVICE DROP

NOT TO SCALE



GAS FURNACE CONDENSATE DETAIL

NOT TO SCALE

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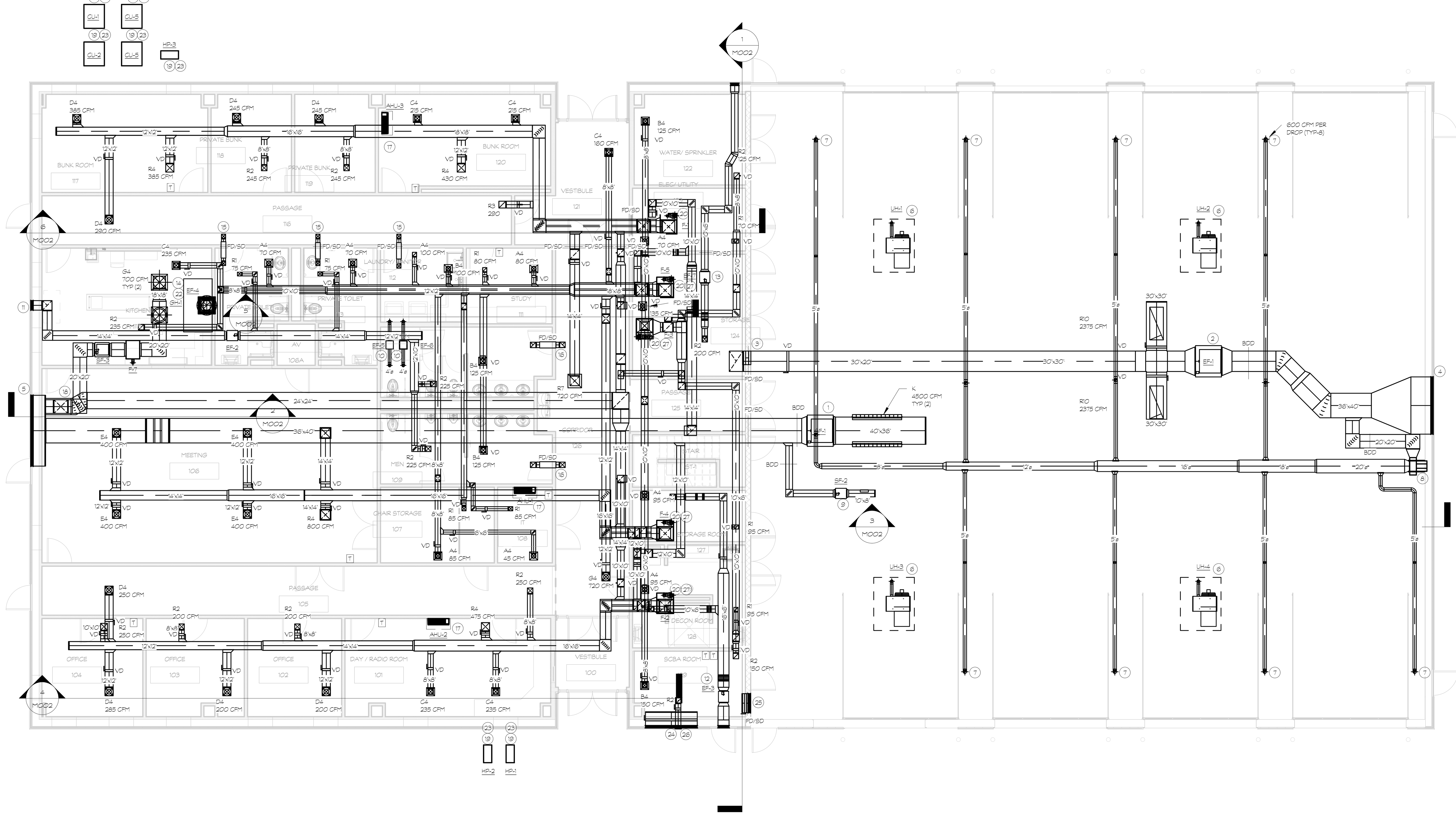
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
DETAILS - PLUMBING

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: MPB
Project Number: 13.220

Drawing Number: P501



1 M001 MAIN LEVEL MECHANICAL
SCALE: 1/8" = 1'-0"

PLAN NOTES

1. PROVIDE APPARATUS SUPPLY FAN, SF-1. VERIFY EXACT MOUNTING HEIGHT IN FIELD. SUSPEND FAN WITH VIBRATION ISOLATION. INTERLOCK FAN WITH CO/NO2 SYSTEM AND EF-1. FAN SHALL ACTIVATE WHEN CO OR NO2 SENSORS EXCEED HIGH LIMIT. PROVIDE (2) 72X15 HIGH CAPACITY DRUM LOUVERS OFF OF SUPPLY DUCT. DISCHARGE ANGLE OF LOUVERS TOWARDS THE FLOOR.
2. PROVIDE APPARATUS EXHAUST FAN, EF-1. VERIFY EXACT MOUNTING HEIGHT IN FIELD. SUSPEND FAN WITH VIBRATION ISOLATION. INTERLOCK FAN WITH CO/NO2 SYSTEM AND SF-1. FAN SHALL ACTIVATE WHEN CO OR NO2 SENSORS EXCEED HIGH LIMIT.
3. PROVIDE 30X20 DUCT DROP TO FLOOR LEVEL OF STORAGE ROOM. PROVIDE 48X20 EXHAUST GRILLE THROUGH WALL OF STORAGE ROOM INTO APPARATUS BAY AT APPROXIMATELY 12" AFF. BALANCE TO 4750 CFM.
4. PROVIDE 84X84" (OR EQUIV) EXHAUST AIR LOUVER IN EXTERIOR WALL. PROVIDE INSECT SCREEN. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL PLANS. PROVIDE SHEETMETAL PLENUM EXTENDING FROM LOUVER INTO APPARATUS BAY FOR CONNECTION TO EXHAUST DUCTWORK.
5. PROVIDE 104"X84" (OR EQUIV) OUTSIDE AIR LOUVER IN EXTERIOR WALL. PROVIDE INSECT SCREEN. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL PLANS. PROVIDE SHEETMETAL PLENUM FOR DUCTWORK CONNECTION.
6. PROVIDE (4) GAS FIRED UNIT HEATERS, REFER TO SCHEDULE. SUSPEND UNITS FROM STRUCTURE WITH VIBRATION ISOLATION. EXTEND VENT THROUGH ROOF. CUT, PATCH AND REPAIR ROOF AS REQUIRED.
7. PROVIDE MAGNEGRIP TAILPIPE EXHAUST SYSTEM. PROVIDE 5" DROPS TO EACH VEHICLE LOCATION. FIELD VERIFY WITH OWNER LOCATIONS OF DROPS AND ORIENTATION OF TAILPIPE ON FIRE STATION VEHICLES.
8. MAGNEGRIP TAILPIPE EXHAUST FAN. SUPPORT FROM STRUCTURE WITH VIBRATION ISOLATION.
9. PROVIDE APPARATUS SUPPLY FAN, SF-2. VERIFY EXACT MOUNTING HEIGHT IN FIELD. SUSPEND FAN WITH VIBRATION ISOLATION. FAN SHALL RUN CONTINUOUSLY. PROVIDE 14X8 SIDEWALL SUPPLY GRILLE OFF OF SUPPLY DUCTWORK TO SPACE.
10. PROVIDE DRYER EXHAUST FAN, EF-5/6. INTERLOCK TO RUN WHEN DRYER IS ACTIVATED. INTERLOCK ASSOCIATED FURNACE TO RUN WHEN DRYERS ARE ACTIVATED. SUSPEND FROM STRUCTURE WITH VIBRATION ISOLATION. ROUTE 4" DUCT THROUGH ROOF AND TERMINATE WITH ROOF CAP.
11. PROVIDE 20X20" (OR EQUIV) EXHAUST AIR LOUVER IN EXTERIOR WALL. PROVIDE INSECT SCREEN. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL PLANS. PROVIDE SHEETMETAL PLENUM EXTENDING FROM LOUVER INTO TO BATHROOM EXHAUST DUCTWORK.
12. PROVIDE DECON EXHAUST FAN, EF-3. PROVIDE WALL SWITCH IN EACH ROOM TO ACTIVATE FAN. PROVIDE 16X6 EXHAUST LOUVER IN EXTERIOR WALL. PROVIDE INSECT SCREEN AND BACKDRAFT DAMPER. CUT, PATCH AND REPAIR WALL AS REQUIRED.
13. PROVIDE STORAGE ROOM EXHAUST FAN, EF-7. PROVIDE WALL SWITCH IN EACH ROOM TO ACTIVATE FAN. PROVIDE 12X12 EXHAUST LOUVER IN EXTERIOR WALL. PROVIDE INSECT SCREEN AND BACKDRAFT DAMPER. CUT, PATCH AND REPAIR WALL AS REQUIRED.
14. COORDINATE FINAL KITCHEN EXHAUST HOOD DIMENSIONS WITH OWNER PRIOR TO ORDERING.
15. PROVIDE (2) 6X6 TRANFER GRILLES. PROVIDE FIRE/SMOKE DAMPER IN TRANSFER DUCT.
16. PROVIDE (2) 8X8 TRANFER GRILLES. PROVIDE FIRE/SMOKE DAMPER IN TRANSFER DUCT.
17. PROVIDE VRV SPLIT SYSTEM AIR HANDLING UNIT AND HEAT PUMP. MOUNT APPROXIMATELY 6 FT AFF. COORDINATE EXACT MOUTING HEIGHT WITH ARCHIETCT. PROVIDE 1" TRAPPED AND INSULATED CONDENSATE LINE TO CLOSEST PLUMBING SANITARY CONNECTION. PROVIDE CONNECTION THROUGH FIXED AIR GAP.
18. CONNECT 24X24 DUCTWORK TO OUTSIDE AIR LOUVER. ROUTE DUCTWORK TO MEZZANIZE FOR CONNECTION TO RETURN SIDE OF FURNACE DUCTS.
19. COORDINATE LINE REFRIGERANT LINE SIZING BASED ON ACTUAL LAYOUT AND LENGTH OF RUN IN FIELD. ENSURE EQUIPMENT SUBMITTED CAN ACCOMODATE LENGTH OF RUN.
20. PROVIDE INTAKE AND EXHAUST VENT THROUGH ROOF. PROVIDE CONCENTRIC VENT BASED ON MANUFACTURER'S REQUIREMENTS. TERMINATION HEIGHT ABOVE ROOF LEVEL IN ACCORDANCE WITH CODE.
21. PROVIDE FIRE/SMOKE DAMPERS IN ALL DUCTS PENETRATING THE MEZZANINE WALL.
22. PROVIDE GREASE EXHAUST HOOD, GH-1. ROUTE 14" ROUND GREASE EXHAUST DUCT UP TO EF-4 MOUNTED ON ROOF. PROVIDE PITCHED CURB MATCHING PITCH OF ROOF. CUT, PATCH AND REPAIR ROOF AS REQUIRED.
23. MOUNT CONDENSING UNITS AND HEAT PUMPS ON 4" CONCRETE PAD. ROUTE REFRIGERANT PIPING INTO EXTERIOR WALL AND UP TO MEZZANINE SPACE. CUT, PATCH AND REPAIR OPENINGS. REFER TO MANUFACTURER'S INSTRUCTIONS FOR SERVICE CLEARANCES.
24. PROVIDE 76X24 OUTSIDE AIR LOUVER. EXTEND DUCT INTO SPACE. PROVIDE CONTROL DAMPER IN DUCT. DAMPER SHALL OPEN ON HIGH TEMPEARTURE WITHIN SPACE. MOUNT LOUVER 12" AFF, VERIFY EXACT MOUNTING HEIGHT IN FIELD WITH ARCHITECT.
25. PROVIDE 28X28 EXHAUST AIR LOUVER. EXTEND DUCT INTO SPACE. PROVIDE CONTROL DAMPER IN DUCT. DAMPER SHALL OPEN ON HIGH TEMPEARTURE WITHIN SPACE. MOUNT LOUVER JUST BELOW FINISHED CEILING WITHIN SPACE. VERIFY EXACT MOUNTING HEIGHT IN FIELD WITH ARCHITECT.
26. PROVIDE 8X8 GRILLE IN CEILING OF SCBA ROOM. EXTEND DUCT TO 8X8 LOUVER MOUNTED ON EXTERIOR WALL. PROVIDE CONTROL DAMPER AND SPACE PRESSURE SENSOR TO OPEN DUCT WHEN LOW AIR PRESSURE IS DETECTED WITHIN SPACE.
27. PROVIDE VERTICAL GAS FIRED CONDENSING FURNACE WITH D/X COIL. MOUNT ON STAND ON MEZZANINE FLOOR. PROVIDE SECONDARY CONDENSATE PAN WITH FLOAT ALARM WHICH DISABLES UNIT ON DETECTION OF CONDENSATE. PROVIDE THERMOSTATS WITHIN SPACES AS SHOWN ON DRAWING. CONNECT OUTSIDE AIR DUCT TO RETURN SIDE OF AIR HANDLING UNIT. PROVIDE CONTROL DAMPER IN OUTSIDE AIR DUCT. PROVIDE 1" TRAPPED AND INSULATED CONDENSATE LINE THROUGH ACID NEUTRALIZER FROM UNIT TO CLOSEST SANITARY CONNECTION. REFER TO PLUMBING DRAWINGS.
28. PROVIDE KITCHEN MAKEUP AIR SUPPLY FAN, SF-3 AND GAS FIRED DUCT FURNACE, F-7. SUSPEND EQUIPMENT FROM STRUCTURE WITH VIBRATION ISOLATION. INTERLOCK EQUIPMENT WITH GREASE HOOD EXHAUST FAN, EF-4. CONNECT 20X20 DUCTWORK FROM OUTSIDE AIR LOUVER. PROVIDE 4" VENT THROUGH ROOF. CUT, PATCH AND REPAIR OPENING.
29. WHERE POSSIBLE THE CONTRACTOR SHALL TERMINATE ALL ROOF PENETRATIONS AND FLUES THROUGH THE ROOF ON THE BACKSIDE OF THE BUILDING.

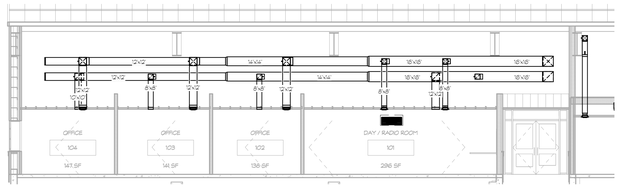
Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

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3190 Whitney Avenue, Hamden, CT 06518-2340
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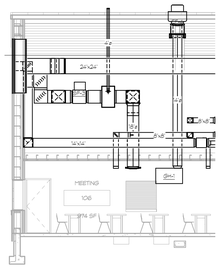
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MECHANICAL PLAN
100% CD Submission

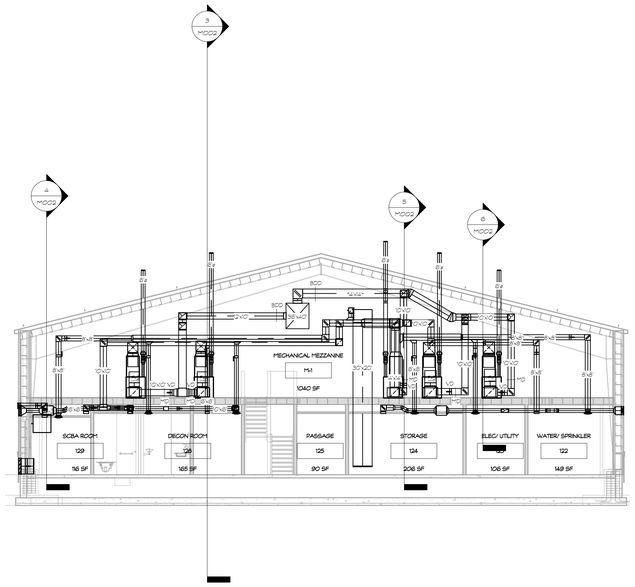
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Drawn By: MJC
Project Number: 13.220
Drawing Number: M001



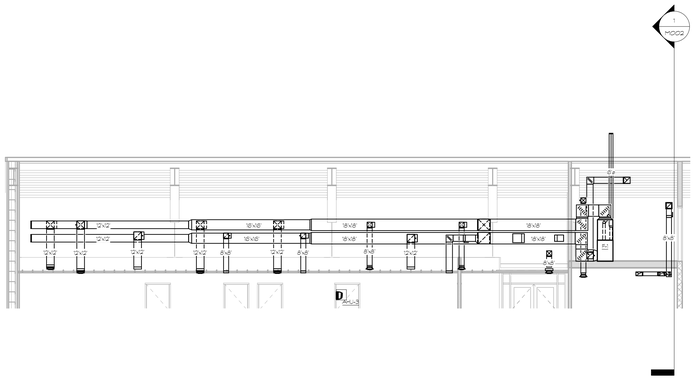
4 M002 Offices
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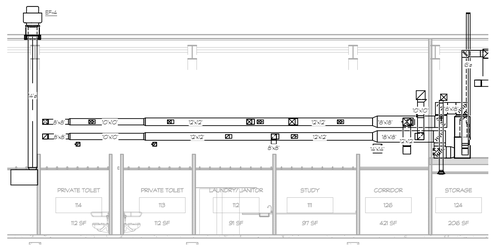
2 M002 Kitchen
SCALE: 1/8" = 1'-0"



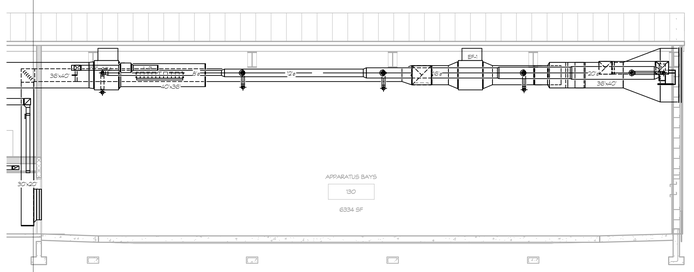
1 M002 Mezzanine
SCALE: 1/8" = 1'-0"



6 M002 Bunk Rooms
SCALE: 1/8" = 1'-0"



5 M002 Study/Toilet/Janitor's Closet
SCALE: 1/8" = 1'-0"



3 M002 Apparatus Bay
SCALE: 1/8" = 1'-0"

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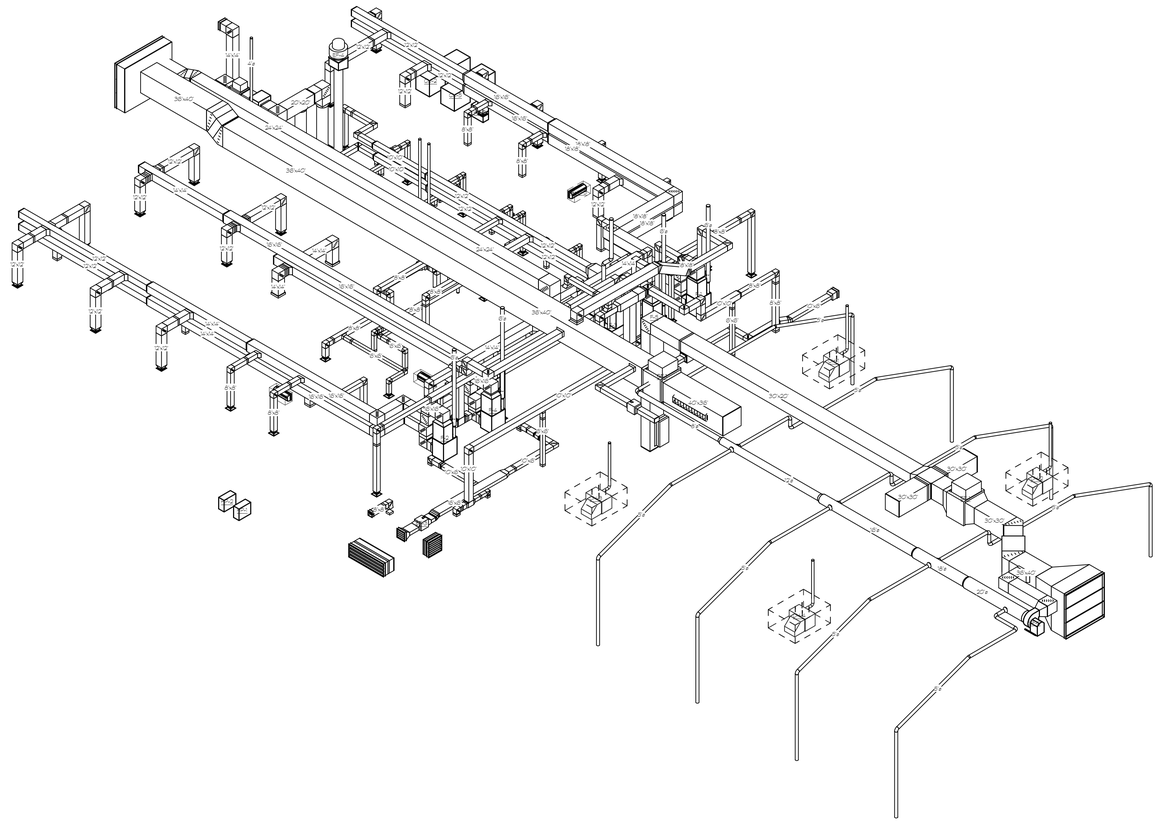
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MECHANICAL SECTIONS

100% CD Submission

Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: MJC
Project Number: 13.220

Drawing Number:
M002



1 M003 Mechanical Isometric - View 1
SCALE

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REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MECHANICAL ISOMETRIC

100% CD Submission

Date: 12/1/16
Scale:
Drawn By: MJC
Project Number: 13.220

Drawing Number:
M003

SPLIT SYSTEM HEAT PUMP UNITS

					ELECTRICAL				HEATING			COOLING			WEIGHTS	
					AHU		HP									
TAG	LOCATION	AIR HANDLING UNIT	HEAT PUMP UNIT	SA CFM	V/ø	MCA/MOCP	V/ø	MCA/MOCP	MIN HTG	MAX HTG	EFF	MIN CLG	MAX CLG	SEER	AHU	HP
									BTUH	BTUH	COP	BTUH	BTUH	MBH	LBS	LBS
AHU-1/HP-1	IT CLOSET	DAIKIN FTXN12KEVJU	RXN12KEVJU	357	208/1	–	208/1	7/15	4400	16400	2.9	4400	12000	18	20	80
AHU-2/HP-2	RADIO ROOM	DAIKIN FTXN12KEVJU	RXN12KEVJU	357	208/1	–	208/1	7/15	4400	16400	2.9	4400	12000	18	20	80
AHU-3/HP-3	BUNK ROOM	DAIKIN FTXN12KEVJU	RXN12KEVJU	357	208/1	–	208/1	7/15	4400	16400	2.9	4400	12000	18	20	80

PROVIDE WITH WALL MOUNTED, CONDENSATE PUMP, PROGRAMMABLE CONTROLLER/THERMOSTAT.

GAS FIRED FURNACES AND CONDENSING UNITS

							ELECTRICAL				HEATING			COOLING			WEIGHTS	
							FURNACE		CU		INPUT	OUTPUT	EFF	SC	TC	SEER	FURNACE	CU
TAG	LOCATION	FURNACE MFGR/MODEL	CU MFGR/MODEL	SA CFM	OA CFM	ESP(IN WG)	V/ø	HP	V/ø	MCA/MOCP	MBH	MBH	%	MBH	MBH	MBH	LBS	LBS
F-1/CU-1	BUNK ROOMS	CARRIER 59MN7A120	CARRIER 24ANB7048 4 -TON	1400	350	0.5	115/1	1	208/1	27.8/40	100	98	98	36.2	49.1	17.5	100	240
F-2/CU-2	OFFICES	CARRIER 59MN7A080	CARRIER 24VNA948A003 - 3.5 TON	1300	180	0.5	115/1	1	208/1	26.1/40	80	78	98	31.7	44.6	18.0	100	240
F-3	UTILITY ROOMS	CARRIER 59MN7A060	NO COOLING	620	400	0.5	115/1	1/2			60	59	98				100	
F-4/CU-4	MEETING ROOM	CARRIER 59MN7A120	CARRIER 24ANB7048 4 -TON	1600	450	0.5	115/1	1	208/1	27.8/40	100	98	98	36.2	49.1	17.5	100	240
F-5/CU-5	BATHROOMS/COORIDOR/STUDY	CARRIER 59MN7A120	CARRIER 24ANB7060 - 5 TON	1820	350	0.5	115/1	1	208/1	30.1/50	120	117	98	41.0	53.0	18.0	100	240

PROVIDE WITH MODULATING GAS BURNER, DUCT MOUNTED D/X COIL, VIBRATION ISOLATION, SECONDARY CONDENSATE PAN WITH FLOAT ALARM WHICH DEACTIVATES UNIT ON DETECTION OF CONDENSATE, FILTER KIT, DISCONNECTS, VENT KITS, ACID NEUTRALIZATION FOR FLUE CONDENSATE.

SUPPLY AIRFLOWS LISTED ON SCHEDULE ARE INDICATIVE OF UNIT PERFORMANCE. BALANCE TO INDIVIDUAL AIRFLOWS LISTED ON MECHANICAL PLANS.

CONTRACTOR SHALL COORDINATE REFIRGERANT PIPING SIZE WITH MANUFACTURER, BASED ON ACTUAL PIPE ROUTING. PIPING RUN IS LONG (UP TO 150 FT PLUS ELEVATION GAINS) AND CONTRACTOR SHALL MINIMIZE BENDS AND ELBOWS. PROVIDE START CAPACITORS AND RELAYS, HEATING PISTON CHANGE, INVERTED SUCTION TRAPS, HARD SHUT OFF TXV'S, CRANKCASE HEATERS AND LIQUID LINE SOLENOIDS. REFER TO CARRIER REFRIGERANT PIPING DESIGN AND FABRICATION GUIDELINES FOR DETAILS.

PROVIDE 4" CONCRETE PAD FOR HEAT PUMPS AND CONDENSING UNITS. REFER TO ARCHITECTURAL DRAWINGS.

MOUNT EACH FURNACE ON 1" NEOPRENE WAFFLE PAD.

PROVIDE FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN DUCT CONNECTIONS TO UNIT.

BALANCER SHALL PROVIDE SHEAVES AS REQUIRED TO ACHIEVE DESIGN AIRFLOWS.

CONTRACTOR IS RESPONSIBLE FOR ANY ELECTRICAL CHANGES AS A RESULT OF SUBSTITUTED EQUIPMENT.

EXHAUST FANS

TAG	LOCATION	TYPE	MFGR/MODEL	CFM	SP (IN WG)	V/ø	HP (A)	WEIGHT
EF-1	APPARATUS BAY EXHAUST	INLINE	GREENHECK BSQ-300	9500	0.75	208/1	3	750
EF-2	MEN 109/WOMEN 110	INLINE	GREENHECK SQ-95-VG	850	0.50	115/1	1/4	80
	TOILET 113/114							
EF-3	DECON 144/145	INLINE	GREENHECK SQ-95-VG	400	0.25	115/1	1/4	80
EF-4	KITCHEN EXHAUST FAN	ROOF	GREENHECK CUE-141-HP	1400	1.25	208/1	3/4	125
EF-5/6	DRYER EXHAUST FAN	INLINE	FANTECH FG6	200	0.50	115/1	(0.58)	175
EF-7	STORAGE 124	INLINE	GREENHECK SQ-85-VG	200	0.25	115/1	1/4	80
SF-1	APPARATUS BAY SUPPLY	INLINE	GREENHECK BSQ-300	9500	0.75	208/1	3	750
SF-2	APPARATUS BAY SUPPLY	INLINE	GREENHECK SQ-95-VG	300	0.25	115/1	1/4	80
SF-3	KITCHEN MAKEUP AIR	INLINE	GREENHECK SQ-130-VG	1400	0.25	115/1	3/4	80

PROVIDE INLINE FANS WITH MOTOR COVER, BACKDRAFT DAMERS, SPEED CONTROLLERS, MOTOR STARTERS, DISCONNECT SWITCH, HANGING VIBRATION ISOLATION.

PROVIDE ROOF MOUNTED FANS WITH BACKDRAFT DAMERS, SPEED CONTROLLERS, MOTOR STARTERS, DISCONNECT SWITCH, ROOF CURB, INSECT SCREEN.

EF-4 SHALL BE RATED FOR UL762. PROVIDE WITH GREASE DRAIN AND TRAP.

INTERLOCK EF-5/6 TO RUN WHEN DRYER IS ACTIVATED.

PROVIDE CEILING FANS WITH BACKDRAFT DAMERS, SPEED CONTROLLERS, MOTOR STARTERS, DISCONNECT SWITCH, HANGING VIBRATION ISOLATION, WALL CAP.

GAS FIRED UNIT HEATERS

TAG	SERVICE	MFGR/MODEL	INPUT (MBH)	OUTPUT (MBH)	CFM	△T	V/ø	HP	WEIGHT (LBS)
UH-1,2,3,4	APPARATUS BAY	MODINE PTP 150	150	120	2140	53	115/1	1/6	200

PROVIDE WITH BAKD ON POLYESTER POWDER PAINT COATING, TOTALLY ENCLOSED FAN MOTORS, FAN GUARD, FACTORY INSTALLED POWER EXHAUSTER, NATURAL GAS CONTROLS, SINGLE STAGE GAS CONTROLS, SUPPLY AIR HIGH LIMIT SAFETY CONTROLS, DIFFERENTIAL PRESSURE SWITCH FOR PROOF OF VENTING, DIRECT SPARK IGNITION WITH CONTINUOUS RETRY CONTROL SYSTEM, CONTROL TERMINAL BOARD AND LOW VOLTAGE TERMINAL CONNECTIONS, GAS CONTROL STEP DOWN TRANSFORMER, FAN DELAY TIMER, 90°F DEFLECTOR HOOD.

GREASE EXHAUST HOOD

TAG	LOCATION	MFGR/MODEL	CLASSIFICATION	MOUNTING	CFM	△P	DIMENSIONS	WEIGHT (LBS)
GH-1	KITCHEN	GREENHECK GHEW	TYPE 1	WALL	1400	0.447	78 X 42 X 24	300

PROVIDE WITH FACTORY PIPED ANSUL FIRE SUPPRESSION SYSTEM. INTERLOCK POWER TO COOKING EQUIPMENT TO SHUT OFF IN THE EVENT THE ANSUL SYSTEM ACTIVATES.
PROVIDE HOOD WITH 430 STAINLESS STEEL, 18 GAUGE CONSTRUCTION.
PROVIDE WITH REMOVABLE BAFFLES AND FILTER REMOVAL TOOL.
PROVIDE WITH LIGHT FIXTURE.
HOOD SHALL BE UL 710 LISTED AND LISTED FOR ZERO CLEARANCE TO COMBUSTIBLE.
HOOD SHALL CONFORM TO NFPA 96.
HOOD MANUFACTURER SHALL VERIFY SIZE OF HOOD BASED ON FINAL KITCHEN EQUIPMENT SELECTION. VERIFY PRIOR TO SUBMITTING.
PRIOR TO PLACING ORDER CONTRACTOR SHALL CONFIRM FINAL DIMENSIONS OF HOOD AND CAPACITY OF ASSOCIATED EXHAUST FAN WITH OWNER BASED ON FINAL EQUIPMENT LAYOUT.

TAILPIPE EXHAUST SYSTEM

BY MAGNEGRIP (OR APPROVED EQUAL)

EXHAUST FAN:
MAGNEGRIP CF-363-7.5
4800 CFM AT 6.0" WG
208V/3ø, 7.5 HP, 3450 RPM

CONTROL PANEL: MAGNEGRIP #500181-05 (QTY-1)
WIRELESS AUTOMATIC CONTROLLER: MAGNEGRIP #500180-03 (QTY-1)
RAIN CAP: MAGNEGRIP #500181-14 (QTY-1)
VERTICAL STACK RAIL: MAGNEGRIP VSR-201 (QTY-1)
FLEX HOSE TRACK: MAGNEGRIP FSTM-305 (QTY-7
AUTO START: MAGNEGRIP #540558-01 (QTY-8)

PROVIDE WITH AIRTIGHT SPIRAL DUCT SYSTEM, SUPPORT HARDWARE FOR FAN, DUCT AND RAILS. COORDINATE LOCATION OF VERTICAL STACK RAIL WITH OWNER PRIOR TO INSTALLATION.

KITCHEN MAKEUP AIR FURNACE

F-7 MODINE DFP125TFPNN10A1 DUCT FURNACE
AIRFLOW: 1400 CFM
MBH IN/OUT: 125/100
TEMP RISE (°F): 66.1
V/ø: 115/1
AMPS: 1.75
WEIGHT: 125 LBS
PROVIDE WITH 409 STAINLESS STEEL HEAT EXCHANGER, RETRY IGNITION, POWER VENT.

REGISTERS, GRILLES AND DIFFUSERS

TAG	SIZE	TYPE	NECK ø	CFM	MAX TOTAL PRESSURE (IN. WG)	MAX NC	MANUFACTURER & MODEL NO.
A	6X6	CEILING DIFFUSER	6"	0-120	0.131	21	PRICE 4 WAY ADJUSTABLE SUPPLY DIFFUSER
B	9X9	CEILING DIFFUSER	6"	121-155	0.103	21	PRICE 4 WAY ADJUSTABLE SUPPLY DIFFUSER
C	12X12	CEILING DIFFUSER	8"	156-245	0.080	20	PRICE 4 WAY ADJUSTABLE SUPPLY DIFFUSER
D	12X12	CEILING DIFFUSER	12"	246-390	0.092	20	PRICE 4 WAY ADJUSTABLE SUPPLY DIFFUSER
E	15X15	CEILING DIFFUSER	12"	391-471	0.085	22	PRICE 4 WAY ADJUSTABLE SUPPLY DIFFUSER
F	18X18	CEILING DIFFUSER	14"	472-640	0.080	22	PRICE 4 WAY ADJUSTABLE SUPPLY DIFFUSER
G	18X18	CEILING DIFFUSER	16"	641-977	0.109	29	PRICE 4 WAY ADJUSTABLE SUPPLY DIFFUSER
H	12X10	SIDEWALL GRILLE	12X10	200-350	0.040	20	PRICE SERIES 500 SIDEWALL SUPPLY GRILLE
I	24X24	CEILING DIFFUSER	8"	0-210	0.050	–	PRICE VARITHERM VPD-HC VAV DIFFUSER
J	24X24	CEILING DIFFUSER	10"	210-325	0.063	17	PRICE VARITHERM VPD-HC VAV DIFFUSER
K	72X15	DRUM LOUVER	72/15	4500	0.062	30	PRICE HCD DRUM LOUVER
R1	6X6	RETURN GRILLE		0-105	0.050	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE
R2	8X8	RETURN GRILLE		106-260	0.073	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE
R3	10X10	RETURN GRILLE		261-355	0.054	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE
R4	12X12	RETURN GRILLE		356-530	0.054	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE
R5	14X14	RETURN GRILLE		531-735	0.054	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE
R6	16X16	RETURN GRILLE		736-810	0.054	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE
R7	20X20	RETURN GRILLE		811-1285	0.054	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE
R8	22X22	RETURN GRILLE		1286-1570	0.054	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE
R9	24X24	RETURN GRILLE		1600-2500	0.054	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE
R10	48X20	RETURN GRILLE		4500	0.085	20	PRICE EGG CRATE RETURN/EXHAUST GRILLE

1. PROVIDE BORDER FOR LAY-IN OR SURFACE MOUNT AS REQUIRED.
2. DUCT RUNOUTS SHALL BE AS INDICATED ON PLAN.
3. AIR PATTERN INDICATED ON PLAN.

DIFFUSER LEGEND: TAG — CFM — PATTERN: 1-WAY, 2-WAY, 3-WAY, 4-WAY

LEGEND: TAG — CFM — NO PATTERN ON RETURN GRILLES; NO PATTERN ON SIDEWALL GRILLES

4. PROVIDE MFGR'S SQUARE TO ROUND TRANSITION FOR DIFFUSERS, FLEX DUCT SHALL NOT EXCEED 5'. PROVIDE 2" PLENUM & DUCT CONNECTION BEHIND RETURNS UNLESS OTHERWISE NOTED.
5. PROVIDE AIR VOLUME DAMPERS FOR EACH SUPPLY, RETURN AND EXHAUST REGISTER, GRILLE AND DIFFUSER.
6. PROVIDE ALUMINUM GRILLES IN ALL BATHROOMS.

VULCAIN GAS DETECTION SYSTEM:

STANDALONE GAS DETECTION SENSORS WITH RELAYS TO EXHAUST FAN. FAN SHALL CYCLE ON LOW LIMIT THRESHOLD READING. ALARM STROBE SHALL BE ACTIVATED ON HIGH LIMIT THRESHOLD READING.

MOUNT CO SENSORS 3 TO 5 FEET ABOVE FINISHED FLOOR. MOUNT NO2 SENSORS 1 TO 3 FEET BELOW CEILING.

PROVIDE ALL SENSORS, RELAYS, STROBE HORNS, WIRING, CONTROLS, CONTROL PANEL AND DEVICES AS REQUIRED FOR INSTALLTION OF SYSTEM. TIE CO/NO2 SYSTEM INTO DDC SYSTEM.

CO: VA201MQ1-CO
NO2: VA201MQ1-NO2

PROVIDE ADDITIONAL WALL MOUNTED SWITCH TO ACTIVATE APPARATUS BAY EXHAUST AND SUPPLY FAN.

REFER TO MANUFACTURER'S INSTRUCTIONS FOR QUANTITY OF SENSORS REQUIRED TO MEET VENTILATION DEMANDS OF THE SPACE. PROVIDE ALL SENSORS AS REQUIRED TO FULLY COVER THE ENTIRE APPARATUS BAY.

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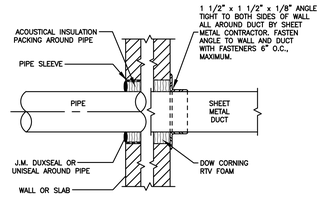
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MECHANICAL SCHEDULES

100% CD Submission

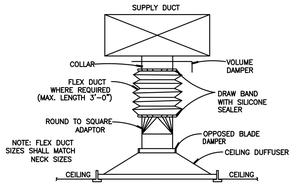
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Project Number: 13.220

Drawing Number: M004



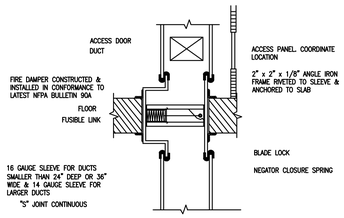
ACOUSTIC CAULKING OF DUCTS AND PIPES

NOT TO SCALE



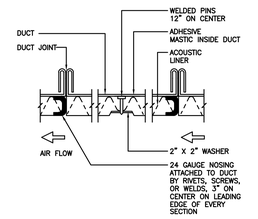
TYPICAL DIFFUSER CONNECTION

NOT TO SCALE



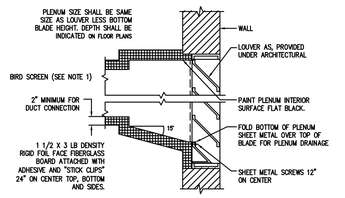
HORIZONTAL FIRE DAMPER DETAIL

NOT TO SCALE



ACOUSTIC DUCT LINING

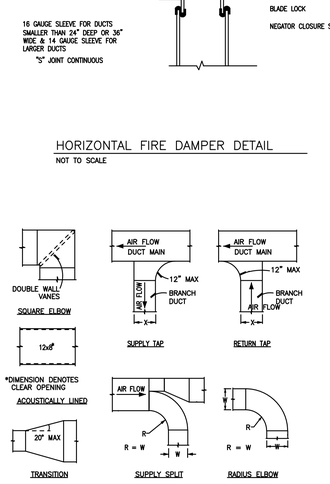
NOT TO SCALE



NOTES:
1. COVER INSIDE FACE OF LOUVER WITH 1/2" MESH ALUMINUM BIRD SCREEN SCREWED IN PLACE, IF NOT SUPPLIED WITH LOUVER.
2. INSULATE UNUSED PORTION OF LOUVER WITH 1 1/2" GLASS FIBER INSULATING BOARD.
3. SEAL ALL PLENUM SEAMS WATERTIGHT WITH SILICONE SEALANT.
4. TYPICAL FOR SUPPLY AND EXHAUST PLENUMS.
5. PROVIDE ACCESS DOOR IN PLENUM. DOOR SHALL BE FIELD COORDINATED FOR ACCESS. DOOR SIZE SHALL BE 36" HIGH x 18" WIDE. REFER TO SPEC FOR DOOR CONSTRUCTION.

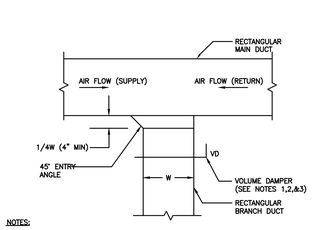
INTAKE AND EXHAUST LOUVER INSTALLATION DETAIL

NOT TO SCALE



DUCT FITTING DETAIL

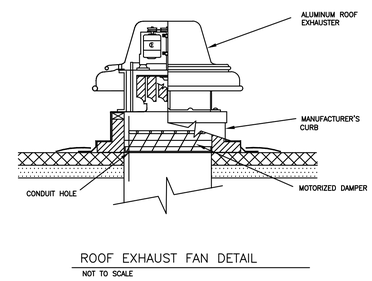
NOT TO SCALE



NOTES:
1. UP TO 1.5 SQ. FT. CROSS SECTIONAL AREA AND NOT EXCEEDING 24" IN WIDTH, USE SINGLE BLADE VOLUME DAMPER.
2. FOR CROSS SECTIONAL AREAS FROM 1.5 TO 3.0 SQ. FT. AND NOT EXCEEDING 24" IN WIDTH, USE 3 SINGLE BLADE VOLUME DAMPERS INDIVIDUALLY OPERATED TO FUNCTION IN AN OPPOSED MANNER.
3. FOR CROSS SECTIONAL AREAS GREATER THAN 3.0 SQ. FT. AND/OR EXCEEDING 24" IN WIDTH, USE GANG OPERATED OPPOSED BLADE VOLUME DAMPER AND FRAME ASSEMBLY.

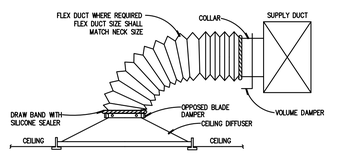
TYPICAL RECTANGULAR SUPPLY/RETURN DUCT TAKEOFF

NOT TO SCALE



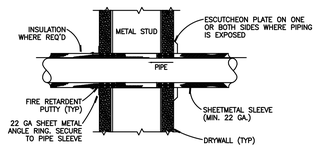
ROOF EXHAUSTFAN DETAIL

NOT TO SCALE



TYPICAL SIDE DIFFUSER CONNECTION

NOT TO SCALE



PIPE SLEEVE THRU RATED WALL

NOT TO SCALE

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MECHANICAL DETAILS

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By:
Project Number: 13.220

Drawing Number: M005

GENERAL

1. THE INTENT OF THESE CONTRACT DOCUMENTS IS FOR THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS. THESE MECHANICAL AND ELECTRICAL SYSTEMS INCLUDE PLUMBING, FIRE PROTECTION, HVAC, ELECTRICAL AND ALL ASSOCIATED SPECIAL SYSTEMS. ALL SYSTEMS SHALL BE COMPLETE IN ALL RESPECTS. OPERATING, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
2. THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS, INCLUDING PROJECT MANUAL, PLANS AND SPECIFICATIONS OF ALL TRADES BEFORE SUBMITTING BID. REFER TO SPECIFICATIONS, PROJECT MANUAL AND PLANS, INCLUDING ALL EQUIPMENT SCHEDULES FOR MECHANICAL AND ELECTRICAL INFORMATION. CONTRACTOR SHALL WALK THROUGH BUILDING PRIOR TO SUBMITTING BID.
3. ALL OF THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY TO FORM A TOTAL DESIGN PACKAGE. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER TO DETERMINE WHICH TRADE CONTRACTOR IS RESPONSIBLE FOR VARIOUS PORTIONS OF THE WORK.
4. ALL WORK AND ACTION DEPICTED AND DESCRIBED SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
5. PROVIDE SUPPORT/BRACING OF EQUIPMENT AND BUILDING SERVICES FOR SEISMIC RESTRAINT AS REQUIRED BY CODE.
6. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
7. ALL EQUIPMENT, MATERIALS AND RELATED SYSTEMS COMPONENTS SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
8. REPAIR AND/OR REPLACE AT NO COST TO OWNER ALL EQUIPMENT AND MATERIALS DAMAGED DURING CONSTRUCTION.
9. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF EQUIPMENT WITH ALL TRADES BEFORE STARTING CONSTRUCTION. ANY MODIFICATIONS TO THE EQUIPMENT LAYOUT REQUIRED FOR INSTALLATION ARE TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
10. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION OF LIGHT FIXTURES AND MOUNTING HEIGHTS OF EQUIPMENT. INCLUSIVE OF RECEPTACLES, SWITCHES, THERMOSTATS, ETC. ALL SUCH EQUIPMENT AND COLORS SHALL BE COORDINATED WITH THE ARCHITECT. CONTACT ARCHITECT FOR CLARIFICATION OF MOUNTING REQUIREMENTS, IF INFORMATION IS NOT CONTAINED IN THE DRAWINGS.
11. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE APPLICABLE CODES IN THE ORDINANCES AND THE REGULATORY AGENCIES HAVING JURISDICTION.
12. ALL EQUIPMENT SHALL BE LOCATED IN ACCESSIBLE LOCATIONS. WHEN A PIECE OF EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING OR WALL THEN THE APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. THESE SHALL BE COORDINATED WITH THE ARCHITECT.
13. WHEN CONFLICTS OCCUR BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
14. CONTRACTORS SHALL COORDINATE THEIR WORK WITH ALL OWNER-FURNISHED EQUIPMENT, INCLUDING REQUIRED SERVICE CONNECTIONS, RECEPTACLES, ETC. BEFORE INSTALLTION.
15. CONTRACTORS SHALL PROVIDE ALL REQUIRED SLEEVES AND SEALS FOR PIPES OR CONDUIT PENETRATING WALLS OR FLOOR SLABS WITH FIRE STOPPING SEALANT WHERE REQUIRED.
16. ALL FLOOR MOUNTED MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE INSTALLED ON A CONCRETE HOUSEKEEPING PAD.
17. ELECTRICAL CONDUITS & BOXES TO BE CONCEALED IN WALLS OR ABOVE CEILING WHEREVER POSSIBLE.
18. COORDINATE ALL PIPING AND CONDUITS LEAVING THE BUILDING WITH THE SITE CONTRACTOR(S) BEFORE INSTALLATION.
19. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT.
20. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO AND WITHIN 50 FEET OF ISOLATED EQUIPMENT THROUGHOUT MECHANICAL EQUIPMENT ROOMS.
21. LOCATE ALL TEMPERATURE, PRESSURE AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP/DOWN STREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
22. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQURIED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS AND OTHER CONCEALED MECHANICAL EQUIPMENT.
23. ALL EQUIPMENT, PIPING, DUCT WORK SHALL BE SUPPORTED AS DETAILED, SPECIFIED AND REQUIRED TO PROVIDE A VIBRATION FREE INSTALLATION.
24. LOCATION AND SIZES OF ALL FLOOR, WALL AND ROOF PENETRATIONS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.

HVAC

1. PIPING AND DUCT WORK LAYOUTS AS INDICATED ON THE DRAWINGS ARE DIAGRAMATIC; PROVIDE ADDITIONAL TRANSITIONS AND OFFSETS AS REQUIRED FOR COORDINATION WITH BUILDING CONSTRUCTION AND THE WORK OF OTHER TRADES.
2. PROVIDE VOLUME DAMPERS, THROTTLING VALVES AND ISOLATION VALVES AS SPECIFIED AND AS INDICATED ON THE DRAWINGS.
3. PROVIDE FIRE DAMPERS AT DUCT PENETRATIONS OF FIRE RATED PARTITIONS.
4. PROVIDE SMOKE DETECTORS ON THE SUPPLY AND RETURN SIDE OF ALL AIR HANDLING EQUIPMENT 2000 CFM AND OVER.
5. ALL MOTORS AND EQUIPMENT SHALL BE OF EFFICIENCIES THAT ARE ELIGIBLE FOR UTILITY COMPANY ENERGY INCENTIVE PROGRAMS.
6. THE AUTOMATIC TEMPERATURE CONTROL SYSTEM SHALL BE COMPLETE IN ALL REGARDS, TESTED AND CAPABLE OF ACHIEVING THE SEQUENCES OF OPERATION. ALL DEVICES SHALL BE UNDER SYSTEM CONTROL. ALL ZONES SHALL BE THERMOSTATICALLY CONTROLLED WHETHER OR NOT A THERMOSTAT, SENSOR OR CONTROLLER IS INDICATED.
7. MAINTAIN MANUFACTURER'S RECOMMENDED MINIMUM CLEARANCES FOR INSTALLATION OF EQUIPMENT.
8. FLEX DUCT RUNS SHALL NOT BE LONGER THAN 5 FT.
9. PROVIDE VOLUME DAMPERS AT ALL SUPPLY DIFFUSERS AND EXHAUST GRILLES.
10. PROVIDE VANDAL RESITANT COVERS FOR ALL THERMOSTATS.
11. ALL DUCTWORK DIMENSIONS, AS SHOWN ON THE DRAWINGS, ARE INTERNAL CLEAR DIMENSIONS AND DUCT SIZE SHALL BE INCREASED TO COMPENSATE FOR DUCT LINING THICKNESS.
12. PROVIDE ALL 90 DEGREE SQUARE ELBOWS WITH DOUBLE RADIUS TURNING VANES UNLESS OTHERWISE INDICATED. ELBOWS SHALL BE UNVANED SMOOTH RADIUS CONSTRUCTION WITH A RADIUS EQUAL TO 1-1/2 TIMES THE WIDTH OF THE DUCT. PROVIDE ACCESS DOORS UPSTREAM OF ALL ELBOWS WITH TURNING VANES.
13. COORDINATE DIFFUSER, REGISTER AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING AND OTHER CEILING ITEMS.
14. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS CONNECTED TO AIR HANDLING UNITS, FANS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE AT THE POINT OF CONNECTION TO THE EQUIPMENT UNLESS OTHERWISE INDICATED.
15. ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVIDED DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
16. PROVIDE ACCESS DOORS IN DUCTWORK TO PROVIDE ACCESS FOR ALL SMOKE DETECTORS, FIRE DAMPERS, SMOKE DAMPERS, VOLUME DAMPERS, COILS AND OTHER ITEMS LOCATED IN DUCTWORK WHICH REQUIRE SERVICE OR INSPECTION.
17. PROVIDE ACCESS DOORS IN DUCTWORK FOR OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL FANS, VALVES AND MECHANICAL EQUIPMENT.
18. PROVIDE FLEXIBLE DUCT CONNECTIONS TO ALL MECHANICAL AIR MOVING DEVICES.
19. PROVIDE AUXILLARY CONDENSATE PANS FOR COOLING COILS. DISCHARGE SECONDARY CONDENSATE PIPING TO VISIBLE LOCATION. PROVIDE FLOAT ALARM TRIGGERED ON HIGH WATER LEVEL.
20. SEISMICALLY RESTRAIN ALL MECHANICAL EQUIPMENT AS REQUIRED PER CODE. CONTRACTOR SHALL OBTAIN SERVICES OF REGISTERED PROFESSIONAL ENGINEER TO PROVIDE ANALYSIS AND CALCULATIONS IN DETERMING EQUIPMENT TO BE RESTRAINED.

PIPING

1. UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO UNDERSIDE OF STRUCTURE OR SLAB, WITH SPACE FOR INSULATION IF REQUIRED.
2. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
3. UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES AND IN LONG PIPING RUNS (100 FEET OR MORE) TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS.
4. ALL PIPING WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
5. PROVIDE FLEXIBLE CONNECTIONS IN ALL PIPING SYSTEMS CONNECTED TO PUMPS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AS CLOSE TO THE EQUIPMENT AS POSSIBLE.
6. SEISMICALLY RESTRAIN ALL PIPNG AS REQUIRED PER CODE. CONTRACTOR SHALL OBTAIN SERVICES OF REGISTERED PROFESSIONAL ENGINEER TO PROVIDE ANALYSIS AND CALCULATIONS IN DETERMING PIPING TO BE RESTRAINED.
7. CONTRACTOR SHALL ENGAGE SERVICES OF PROFESSIONAL ENGINEER WITH EXPERTISE IN SEISMIC, VIBRATION AND ISOLATION CONTROLS. ENGINEER SHALL DETERMINE ALL LOCATIONS, TYPES AND REQUIREMENTS OF SEISMIC CONTROLS, PIPING EXPANSION AND VIBRATION CONTROLS.
8. INSULATE ALL PIPING INCLUDED BUT NOT LIMITED TO REFRIGERANT PIPING, CONDENSATE PIPING, HOT WATER SUPPLY AND RETURN, STEAM SUPPLY AND CONDENSATE RETURN.

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MECHANICAL
GENERAL NOTES

100% CD Submission

Date: 12/16
Scale: NONE
Drawn By: MJC
Project Number: 13.220

Drawing Number:
M006

GENERAL NOTES

GENERAL

1. WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR, THE MORE STRINGENT, AND/OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITHIN NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.

WIRING & RACEWAY:

1. THE DRAWINGS SHOW THE GENERAL LAYOUT AND TYPICAL DETAILS. PROVIDE COMPLETE SYSTEMS. DRAWINGS ARE BASED ON THE SPECIFIED EQUIPMENT. RACEWAY LAYOUTS, BOXES, AND WIRING OF THE SYSTEMS ARE SUBJECT TO APPROVED SHOP DRAWINGS.
2. ENSURE THAT ITEMS TO BE FURNISHED FIT THE SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS, AND PROVIDE SUCH SIZES AND SHAPES OF EQUIPMENT THAT FINAL INSTALLATION SHALL SATISFY THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
3. LOCATIONS OF OUTLETS, SWITCHES, APPLIANCES, ETC. AS SHOWN ON ELECTRICAL PLANS ARE APPROXIMATE. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS AND DETAILS, AND WITH JOB CONDITIONS. INSTALL SWITCHES WITH "OFF" POSITION DOWN. INSTALL RECEPTACLES WITH GROUNDING POLE IN THE UP POSITION FOR VERTICAL MOUNTING AND AT RIGHT FOR HORIZONTAL MOUNTING.
4. LOCATE AND INSTALL ELECTRICAL EQUIPMENT, JUNCTION AND PULL BOXES, PANELBOARDS, SWITCHES, CONTROLS, AND OTHER APPARATUS REQUIRING MAINTENANCE, INSPECTION, AND OPERATION SO AS TO BE READILY ACCESSIBLE.

RACEWAY INSTALLATION

1. IN ALL ARCHITECTURALLY FINISHED SPACES, CONDUITS AND CABLES SHALL BE RUN CONCEALED IN HUNG OR FURRED CEILINGS, SLABS, MASONRY, AND PARTITIONS UNLESS OTHERWISE INDICATED. SAW CUTTING AND FINISHED PATCHING SHALL BE REQUIRED IN EXISTING SLABS AND MASONRY WALLS. IN UNFINISHED SPACES, RACEWAYS MAY BE RUN EXPOSED.
2. UNLESS OTHERWISE INDICATED, EXACT ROUTING OF RACEWAYS SHALL BE DETERMINED BY THE CONTRACTOR TO SUIT PROJECT REQUIREMENTS AND FIELD CONDITIONS.
3. PROVIDE SEPARATE RACEWAYS, JUNCTION BOXES, PULL BOXES AND WIREWAYS FOR ALL EMERGENCY SYSTEM WIRING.

WIRING INSTALLATION

1. DO NOT USE WIRE SMALLER THAN NO. 12 AWG FOR ANY POWER OR LIGHTING CIRCUIT. USE LARGER SIZES WHERE INDICATED, AS REQUIRED BY CODES, AND AS FOLLOWS:

30 AMPERE CIRCUIT:	NO. 10
40 AMPERE CIRCUIT:	NO. 8
50 AMPERE CIRCUIT:	NO. 6
60 AMPERE CIRCUIT:	NO. 6

A. MINIMUM HOMERUN AND BRANCH CIRCUIT WIRING SIZES AND MAXIMUM HOMERUN CONDUIT FILL FOR 120 VOLT, 20 AMPERE CIRCUITS SHALL BE AS FOLLOWS:

LENGTH	CIRCUIT WIRE SIZE	HOME RUN WIRE SIZE	CONDUIT SIZE (3 WIRES/CONDUIT)
0' TO 50'	#12	#12	3/4
51' TO 100'	#12	#10	3/4
101' TO 200'	#10	#8	1"

GREATER THAN 200' - REQUEST DIRECTION FROM ARCHITECT.

NOTE: PROVIDE DERATING PER CODE WHEN INSTALLING MORE THAN 3 CURRENT CARRYING CONDUCTORS IN CONDUIT.

B. HOME RUNS AND BRANCH CIRCUIT WIRING FOR 277 VOLT, 20 AMPERE CIRCUITS SHALL BE AS FOLLOWS:

LENGTH	CIRCUIT WIRE SIZE	HOME RUN WIRE SIZE	CONDUIT SIZE (3 WIRES/CONDUIT)
0' TO 100'	#12	#12	3/4
100' TO 200'	#12	#10	3/4

GREATER THAN 200' - REQUEST DIRECTION FROM ARCHITECT.

NOTE: PROVIDE DERATING PER CODE WHEN INSTALLING MORE THAN 3 CURRENT CARRYING CONDUCTORS IN CONDUIT.

2. DO NOT USE WIRE SMALLER THAN NO. 14 AWG FOR CONTROL CIRCUITS UNLESS OTHERWISE RECOMMENDED BY THE EQUIPMENT OR SYSTEM MANUFACTURER ON WIRING SHOP DRAWINGS, AND SO APPROVED BY THE ARCHITECT.
3. WHERE GREATER THAN THREE (3) CURRENT-CARRYING CONDUCTORS ARE INSTALLED IN ANY ONE CONDUIT OR CABLE, CONDUCTORS MUST BE DERATED AND SIZES INCREASED, IF NEEDED, TO ACCOMMODATE CONDUCTOR DERATING AS REQUIRED BY NEC ARTICLE 310.
4. CONDUCTORS SHALL BE COMPLETELY INSTALLED AND CONNECTED. PROVIDE ALL TERMINALS, LUGS, AND CONNECTORS TO SUIT THE APPLICATION, AND IN COMPLIANCE WITH EQUIPMENT MANUFACTURERS' RECOMMENDATIONS.
5. UNDER NO CIRCUMSTANCES SHALL ANY SWITCH OR CIRCUIT BREAKER BREAK A NEUTRAL CONDUCTOR.
6. THE CIRCUIT NUMBERS INDICATED ON THE DRAWINGS ARE INTENDED AS A GUIDE FOR PROPER CONNECTION OF CIRCUITS AT PANELS. HOWEVER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE FINAL CIRCUITING WORK FULFILLS THE FOLLOWING CONDITIONS:

A. LOADS ON PANEL BUSSES SHALL BE PHASE-BALANCED AS EVENLY AS POSSIBLE.

GROUNDING INSTALLATION:

1. EQUIPMENT GROUNDING

A. INSTALL AN INSULATED GROUND CONDUCTOR, RUN IN THE RACEWAY WITH THE PHASE CONDUCTORS, FOR EACH FEEDER SERVING PANELBOARDS, LIGHTING DIMMER BOARDS, MOTOR CONTROL CENTERS, MOTORS, EQUIPMENT AND APPLIANCES UNLESS OTHERWISE NOTED.

B. INCLUDE AN INSULATED GROUND CONDUCTOR IN ALL CONDUIT RUNS CONTAINING SECTIONS OF FLEXIBLE CONDUIT UNLESS OTHERWISE NOTED.

C. INCLUDE AN INSULATED GROUND CONDUCTOR IN ALL BRANCH CIRCUIT RACEWAYS OR CABLES UNLESS OTHERWISE NOTED.

2. GROUND EACH TELECOMMUNICATIONS, FIRE ALARM, SECURITY, AND BMS SYSTEM EQUIPMENT AND CONTROL PANEL WITHIN EACH TELECOMMUNICATIONS ROOM/CLOSET TO THE ASSOCIATED CLOSET TMGB OR TGB WITH A #4 AWG CONDUCTOR PER TIA/EIA STANDARD 607 - 1994.

TELECOMMUNICATION SYSTEM:

1. PROVIDE A COMPLETE SYSTEM FOR TELECOMMUNICATION WORK, INCLUDING PULL BOXES, OUTLET BOXES, CONDUIT AND WIRING AS INDICATED ON THE DRAWINGS.
2. PROVIDE MINIMUM INSIDE BENDING RADIUS OF 10 TIMES CONDUIT INSIDE DIAMETER FOR TELECOMMUNICATIONS RACEWAYS.
3. WHEN COMPLETED THE SYSTEM SHALL BE TESTED AND CERTIFIED READY FOR OPERATION.
4. FROM EACH OUTLET PROVIDE A 1" EMT CONDUIT ROUTED INTO THE CEILING CAVITY. PROVIDE CAT5E CABLE IN EACH RUN AND TERMINATE AT EQUIPMENT IN ELECTRIC ROOM.

MECHANICAL EQUIPMENT WIRING

1. UNLESS OTHERWISE INDICATED OR SPECIFIED HEREIN, ALL MOTORS, MOTOR STARTERS, MOTOR CONTROLLERS, VARIABLE SPEED FREQUENCY DRIVES, AND ASSOCIATED CONTROL DEVICES ARE FURNISHED AND INSTALLED UNDER DIVISION 23. COORDINATE INSTALLATION AND LOCATIONS WITH OTHER DIVISION CONTRACTORS.
2. POWER WIRING FROM THE INDICATED SOURCE TO THE STARTER/CONTROLLER/DRIVE UNIT, AND FROM THE STARTER/CONTROLLER/DRIVE UNIT TO THE MOTOR, INCLUDING ANY LOCAL DISCONNECT SWITCHES PROVIDED AND INSTALLED BY THIS DIVISION, AND ALL ASSOCIATED LUGS, TERMINALS, AND CONNECTIONS, IS THE WORK OF THIS DIVISION.
3. CONTROL CIRCUIT WIRING IS GENERALLY FURNISHED AND INSTALLED UNDER OTHER DIVISIONS, EXCEPT THAT ANY SUCH WIRING SHOWN ON ELECTRICAL DRAWINGS IS WORK OF THIS DIVISION.
4. PROVIDE 120 VOLT POWER TO ALL TEMPERATURE CONTROL PANELS (TCPS) SUPPLIED AND INSTALLED BY DIVISION 15. USE EMERGENCY POWER SOURCES WHEN AVAILABLE. COORDINATE ALL POWER REQUIREMENTS AND PANEL LOCATIONS WITH DIVISION 15 TEMPERATURE CONTROLS CONTRACTOR.
5. COOPERATE AND COORDINATE WITH THE OTHER TRADES IN THE INSTALLATION, CONNECTION, AND TESTING OF MECHANICAL EQUIPMENT. PERFORM WORK OF THIS SECTION IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS INSTRUCTIONS.

COORDINATION DRAWINGS:

1. DEVELOP AND SUBMIT COORDINATION DRAWINGS AS OUTLINED.

A. SHEET METAL, PLUMBING AND FIRE PROTECTION SHOP DRAWINGS THAT HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER REVIEWED OR FURNISH AS CORRECTED PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS.

B. AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVISED PER ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THEIR WORK:

-MECHANICAL SHEET METAL
-PLUMBING PIPING
-MECHANICAL PIPING
-SPRINKLER PIPING
-ELECTRICAL WORK

2. AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWING AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWING IS RESPONSIBILITY OF CUTTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.
3. THE ARCHITECT AND ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE FOR NOTED CONFLICTS ONLY. COORDINATION DRAWINGS ARE NOT TO BE CONSIDERED PIPING OR DUCT SHOP DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT INDIVIDUAL PIPING AND DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. PIPING AND DUCTWORK SHOP DRAWINGS SHALL FOLLOW THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.
4. SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW COORDINATION DRAWINGS FOR GENERAL ARRANGEMENT AND FOR NOTED CONFLICTS ONLY. SPECIFIC INSTALLATION REQUIREMENTS WILL BE REVIEWED ONLY IN INDIVIDUAL TRADE SHOP DRAWINGS.
5. ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES WHICH IS DEEMED TO BE IN CONFLICT WITH COORDINATION DRAWINGS SHALL BE REMOVED AND REINSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.
6. EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.
7. THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR CLEARLY IDENTIFIED CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

AS BUILT DRAWINGS

1. PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSECUTIVE SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPERWORK WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COMPLY WITH THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND CONCISE SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED IN BOTH HARD COPY AND ELECTRONIC (AUTO-CAD VERSION AS REQUIRED BY THE OWNER) VERSION. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.
2. PROVIDE "AS-BUILT DRAWINGS" INDICATING IN A NEAT AND ACCURATE MANNER A COMPLETE RECORD OF ALL REVISIONS OR THE ORIGINAL DESIGN OF THE WORK INDICATE THE FOLLOWING INSTALLED CONDITIONS:

A. INCLUDE ALL CHANGES AND AN ACCURATE RECORD, ON REPRODUCTIONS OF THE CONTRACT DRAWINGS OR APPROPRIATE SHOP

B. DRAWINGS, OF ALL DEVIATIONS, BETWEEN THE WORK SHOWN AND WORK INSTALLED.

C. EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM PROMINENT BUILDING LINES.

D. APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

E. CONTRACT MODIFICATIONS, ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

F. SUBMIT FOR REVIEW, BOUND SETS OF THE REQUIRED DRAWINGS, MANUALS AND OPERATING INSTRUCTIONS.

G. SUBMIT A COMPLETE MAINTENANCE MANUAL OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.

ELECTRICAL LEGEND

(NOT ALL SYMBOLS ARE USED)

- ELECTRICAL PANEL "120/208 VOLT"
- PANELBOARD FLUSH MOUNTED
- PANELBOARD SURFACE MOUNTED
- NON-FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- WALL MOUNTED JUNCTION BOX, ACCORDING TO NEC REQUIREMENTS
- CEILING MOUNTED JUNCTION BOX, ACCORDING TO NEC REQUIREMENTS
- MOTOR STARTER, COORDINATE EXACT REQUIREMENTS WITH MOTOR FURNISHED
- RECESSED LIGHT FIXTURE, LETTER INDICATES FIXTURE TYPE
- RECESSED LIGHT FIXTURE WITH INTEGRAL BATTERY BALLAST FOR 90 MINUTE EMERGENCY LIGHTING
- TYPICAL RECESSED FLUORESCENT TROFFER, LETTER INDICATES FIXTURE TYPE
- RECESSED FLUORESCENT LIGHT FIXTURE W/INTEGRAL BATTERY BALLAST FOR 90 MINUTE EMERGENCY LIGHTING
- RECESSED HIGH EFFICIENCY GLARE CONTROL FIXTURE, LETTER INDICATES FIXTURE TYPE
- TYPICAL SURFACE MOUNTED FLUORESCENT FIXTURE, LETTER INDICATES FIXTURE TYPE
- TYPICAL PENDANT/CHAIN HUNG FLUORESCENT FIXTURE, LETTER INDICATES FIXTURE TYPE
- WALL MOUNTED FIXTURE, LETTER INDICATES FIXTURE TYPE
- WALL MOUNTED FIXTURE WITH INTEGRAL BATTERY BALLAST FOR 90 MINUTE EMERGENCY LIGHTING
- WALL MOUNTED SCONCE FIXTURE, WITH EMERGENCY BATTERY BALLAST, 1400 LUMENS
- CEILING MOUNTED EXIT SIGN, SHADING INDICATES DIRECTION OF FIXTURE FACE, ARROW INDICATES DIRECTION OF CHEVRON. PROVIDE UNSWITCHED POWER FROM AREA LIGHTING CIRCUIT
- WALL MOUNTED EXIT SIGN, INSTALL AT 7'-6" AFF OR ON EXISTING LOCATION
- DOUBLE FACE EXIT SIGN
- FLOOR PROXIMITY EXIT SIGN, INSTALL "1'-6" AFF
- TWIN HEAD EMERGENCY LIGHT WITH INTEGRAL BATTERY FOR 90 MINUTE EMERGENCY LIGHTING
- $ — SINGLE POLE SWITCH, MOUNT AT 4'-0" AFF
- $_3$ — 3-WAY SWITCH, MOUNT AT 4'-0" AFF
- $_4$ — 4-WAY SWITCH, MOUNT AT 4'-0" AFF
- $_M$ — DUAL TECHNOLOGY, MOTION SENSOR SWITCH, MOUNT AT 4'-0" AFF
- $_D$ — DIMMING SWITCH, MOUNT AT 4'-0" AFF, COMPATIBLE WITH LOAD CONTROLLER
- $_K$ — KEYED SINGLE POLE OR 3-WAY SWITCH, MOUNT AT 4'-0" AFF
- $_{FS}$ — FAN SPEED SWITCH, COMPATIBLE WITH CEILING FANS TO BE CONTROLLED
- $_{PB}$ — PUSH BUTTON CONTROL SWITCH (RAISE/LOWER/STOP), FURNISHED BY OVER HEAD DOOR MANUFACTURER, INSTALLED BY E.C.
- DUPLEX RECEPTACLE, MOUNT AT 1'-8" AFF UNLESS OTHERWISE SPECIFIED
- SINGLE RECEPTACLE, MOUNT AT 1'-8" AFF UNLESS OTHERWISE SPECIFIED
- QUAD RECEPTACLE, MOUNT AT 1'-8" AFF UNLESS OTHERWISE SPECIFIED
- GROUND FAULT INTERRUPTING DUPLEX RECEPTACLE, MOUNT AT 1'-8" AFF UNLESS OTHERWISE SPECIFIED
- WP — RECEPTACLE WITH OUTDOOR RATED (IN-USE) COVER PLATE, PROVIDE FLUSH MOUNTED BOX
- SPECIAL OUTLET CONFIGURATION, SEE NEMA #
- CEILING MOUNTED DUPLEX RECEPTACLE, PROVIDE FLUSH MOUNTED BOX
- FLOOR MOUNTED RECEPTACLE, REFER TO SPECIFICATIONS FOR DETAILS
- ELECTRICAL ALARM BELL, FOR DRY AND WET CONDITIONS
- CKT — BRANCH CIRCUIT HOMERUN (VOLTAGE, BRANCH CIRCUIT POLES)
- CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR (PASSIVE INFRARED/ULTRASONIC) WITH 360° COVERAGE
- CEILING MOUNTED OCCUPANCY SENSOR (ULTRASONIC TYPE) WITH 360° COVERAGE
- EX — CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH EXTENDED RANGE (PASSIVE INFRARED/ULTRASONIC) WITH 360° COVERAGE WITH MINIMUM 55-60' COVERAGE
- F — FIRE ALARM MANUAL PULL STATION - 48 AFF U.O.N.
- FIRE ALARM HORN/STROBE - 80 AFF U.O.N.
- FIRE ALARM STROBE LIGHT - 80 AFF U.O.N.
- $_R$ — SMOKE DETECTOR, "R" DENOTES DEVICE IS PART OF ELEVATOR RECALL SYSTEM
- $_R$ — HEAT DETECTOR "R" DENOTES DEVICE IS PART OF ELEVATOR RECALL SYSTEM
- $_S$ — DUCT MOUNTED IONIZATION SMOKE DETECTOR
- FS — FIRE/SMOKE DAMPER (FURNISHED AND INSTALLED BY HVAC CONTRACTOR), EC SHALL FURNISH AND INSTALL A DUCT SMOKE DETECTOR AND AN ADDRESSABLE FIRE ALARM RELAY AND ALL REQUIRED WIRING FOR CONTROL OF SMOKE DAMPER IN ADDITION TO 120V. CONNECTION.
- CALL-FOR-AID CORRIDOR LIGHT/BUZZER, MOUNT AT 7'-6" AFF
- CALL-FOR-AID SWITCH, MOUNT AT 36" AFF WITH PULL CORD HANGING DOWN TO 6" AFF
- VAV — 120VAC CONNECTION TO VAV BOX BY E.C., LOW VOLTAGE WIRING TO VAVS FROM TRANSFORMER BY HVAC CONTRACTOR
- DW — 120VAC CONNECTION TO DISHWASHER (FURNISHED BY OWNER)
- EF — 120VAC CONNECTION TO ELECTRONIC SENSOR FAUCET (FURNISHED BY PLUMBING CONTRACTOR)
- FV — 120VAC CONNECTION TO ELECTRONIC FLUSH VALVE (FURNISHED BY PLUMBING CONTRACTOR)
- PDS — 120VAC CONNECTION TO MOTORIZED PROJECTION SCREEN AND CONTROLS (FURNISHED BY OWNER)
- PDL — 120VAC CONNECTION TO MOTORIZED PROJECTOR LIFT AND CONTROLS (FURNISHED BY OWNER)
- BH — 120VAC CONNECTION TO GENERATOR BLOCK HEATER (FURNISHED BY GENERATOR MANUFACTURER)
- BC — 120VAC CONNECTION TO GENERATOR BATTERY CHARGER (FURNISHED BY GENERATOR MANUFACTURER)
- R — EMERGENCY BY-PASS RELAY, REFER TO DETAIL ON DWG. E401
- CO — CARBON MONOXIDE DETECTOR
- D — 120VAC CONNECTION TO WALL MOUNTED ELECTRIC HAND DRYER (REFER TO ARCH. DWG. FOR MODEL)
- CRVC — CORD REEL (REELCRAFT #L-4545-123-3 OR EQUAL) WITH 12/3 CORD AND FEMALE CORD AND CAP FOR VEHICLE CHARGING. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
- CF — 60" DIAMETER INDUSTRIAL CEILING FAN (ARROW MODEL #L-660/L OR EQUAL) WITH SLOPED CEILING ADAPTOR. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION. ALL FOUR FANS SHALL BE CONTROLLED FROM ONE SPEED SWITCH.

ABBREVIATIONS

A	AMPERES
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
C	CONDUIT
C/B	CIRCUIT BREAKER
CKT	CIRCUIT
COFF	COFFEE MAKER
DW	DISHWASHER
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX	EXISTING TO REMAIN
REM	EXISTING TO BE REMOVED
HT	HEAT TRACE
JB	JUNCTION BOX
M/B	MAIN BREAKER
M.L.O	MAIN LUG ONLY
MIC	MICROWAVE
MTD	MOUNTED
OHD	OVER HEAD DOOR
PNL	PANELBOARD
PROJ	PROJECTOR
REF	REFRIGERATOR
RE-LOC	RELOCATE/RELOCATED AT THE SAME HEIGHT (PER NEC REQUIREMENTS)
UCR	UNDER COUNTER REFRIGERATOR
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF

ELECTRICAL DRAWING LIST

DRAWING NUMBER	DRAWING DESCRIPTION
E001	ELECTRICAL SYMBOLS, NOTES, ABBREVIATIONS & FIXTURE SCHEDULE
E002	LIGHT FIXTURE SCHEDULES
E101	FIRST FLOOR PLAN - LIGHTING
E102	MEZZANINE PLAN - LIGHTING
E201	FIRST FLOOR PLAN - POWER
E202	MEZZANINE PLAN - POWER
E203	ELECTRICAL SITE PLAN
E301	ELECTRICAL ONE LINE DIAGRAMS
E302	PANEL SCHEDULES
E401	ELECTRICAL DETAILS
E402	ELECTRICAL DETAILS

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
ELECTRICAL SYMBOLS, NOTES, ABBREVIATIONS & FIXTURE SCHEDULE
100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: SEC
Project Number: 13.220
Drawing Number: E001

SITE LIGHTING FIXTURE SCHEDULE

DESIGNATION	DESCRIPTION	MANUFACTURER/ MODEL NUMBER	LAMP			ELECTRICAL			DISTRIBUTION
			TYPE	COLOR TEMP	NO	DRIVER	VOLTAGE	WATTS	
AA	SURFACE MOUNTED FULL CUTOFF ARCHITECTURAL WALL SCONCE WITH INTEGRAL MOTION SENSOR (3500 LUMEN PACKAGE)	GARDCO "01-16-700-NW-SI-4-120-MR2	LED	4000K	16	DIMMING	120	40	TYPE 4
AB	SAME AS TYPE 'AA' EXCEPT WITH 0-10V DIMMING DRIVER IN LIEU OF INTEGRAL MOTION SENSOR	GARDCO "01-16-700-NW-SI-4-120-DD	LED	4000K	16	DIMMING	120	40	TYPE 4
AC	SAME AS TYPE 'AA' EXCEPT WITH EMERGENCY BATTERY PACK	GARDCO "01-16-650-NW-SI-4-120-MR2	LED	4000K	16	DIMMING	120	40	TYPE 4
BB	SURFACE MOUNTED FULL CUTOFF ARCHITECTURAL WALL SCONCE (6700 LUMEN PACKAGE)	GARDCO "01-32-700-NW-SI-4-120-DD	LED	4000K	32	DIMMING	120	70	TYPE 4
CC	FULL CUTOFF ARCHITECTURAL AREA LIGHT FIXTURE MOUNTED ON 18' HIGH ROUND ALUMINUM POLE (5800 LUMEN PACKAGE)	GARDCO ECF-DM1-3-35LA-647D-NW-UNV / RAL5-5TB-18-D1-*	LED	4000K	--	DIMMING	120	140	TYPE 3
DD	SAME AS TYPE CC EXCEPT DISTRIBUTION (5200 LUMEN PACKAGE)	GARDCO ECF-DM1-4-35LA-647D-NW-UNV / RAL5-5TB-18-D1-*	LED	4000K	--	DIMMING	120	140	TYPE 4
EE	SAME AS TYPE CC EXCEPT DISTRIBUTION (14700 LUMEN PACKAGE)	GARDCO ECF-DM1-3-35LA-647D-NW-UNV / RAL5-5TB-18-D1-*	LED	4000K	--	DIMMING	120	140	TYPE 5
FF	42' HIGH ROUND ALUMINUM LED BOLLARD WITH DOME TOP AND MOTION RESPONSE CONTROL (XX LUMEN PACKAGE)	GARDCO SPM830-42-MR-NW-80-UNV-*	LED	4500K	--	DIMMING	120	41	180 DEGREE
GG	12.25' DIA. FLUSH IN GROUND LED FLAG POLE/WELL LIGHT. WITH DIRECTIONAL SHIELD & FLAT ⅛" TEMPERED BOROSILICATE GLASS LENS. (2718 LUMEN PACKAGE)	HADCO SLA3SSC-FDSNN	LED	4000K	--	DIMMING	120	19	36 DEGREE NARROW FLOOD

LIGHTING FIXTURE SCHEDULE

DESIGNATION	DESCRIPTION	MANUFACTURER/ MODEL NUMBER	LAMP			ELECTRICAL			NOTES
			TYPE	COLOR TEMP	NO	DRIVER	VOLTAGE	WATTS	
A	RECESSED MTD 2FT x 2FT LED TROFFER WITH 125' THICK ACRYLIC PRISMATIC LENS AND FLUSH STEEL DOOR (2200 LUMEN PACKAGE)	DAY-BRITE LIGHTING 2TG2OL840-2-FS-12F-UNV-DIM	LED	4000K		DIMMING	120	25	
A1	SAME AS TYPE 'A' EXCEPT 3000 LUMEN PACKAGE	DAY-BRITE LIGHTING 2TG3OL840-2-FS-12F-UNV-DIM	LED	4000K		DIMMING	120	35	
A2	SAME AS TYPE 'A' EXCEPT 3800 LUMEN PACKAGE	DAY-BRITE LIGHTING 2TG38L840-2-FS-12F-UNV-DIM	LED	4000K		DIMMING	120	45	
B	RECESSED MTD HIGH PERFORMANCE ARCHITECTURAL 2FT x 2FT LED TROFFER WITH DIFFUSED SMOOTH CENTER LENS (3800 LUMEN PACKAGE)	DAY-BRITE LIGHTING 2ST038L840-2-DS-UNV-DIM	LED	4000K		DIMMING	120	45	
B1	SAME AS TYPE 'B' EXCEPT 3000 LUMEN PACKAGE	DAY-BRITE LIGHTING 2ST030L840-2-DS-UNV-DIM	LED	4000K		DIMMING	120	35	
C	RECESSED 4IN. SQ. LED DOWN LIGHT WITH DIFFUSED GLASS LENS (2000 LUMEN PACKAGE)	LIGHTOLIER CANALDSNUWZIOV/CANALOSDLAOKCCLWVB	LED	4000K		DIMMING	120	10	
D	PENDANT MOUNTED 8' INDUSTRIAL LED FIXTURE WITH AN OVAL UPLIGHT DIFFUSE LENS (8200 LUMEN PACKAGE)	DAY-BRITE LIGHTING LBK80L840-UNV-UD-FKR-126	LED	4000K		ELECTRONIC	120	65	
D1	SAME AS TYPE 'D' EXCEPT WITH INTEGRAL OCCUPANCY SENSOR	DAY-BRITE LIGHTING LBK80L840-UNV-UD-OCCLB-FKR-126	LED	4000K		ELECTRONIC	120	65	
E	SINGLE FACE WALL/CEILING MOUNTED LED EXIT SIGN WITH RED LETTERS AND WHITE ALUMINUM HOUSING	EVENLITE TLAS-AC-R-W	LED			ELECTRONIC	120/277	5	(2)
E1	SINGLE FACE WALL/CEILING MOUNTED LED EXIT SIGN WITH INTERNATIONAL SYMBOL OF ACCESSIBILITY, RED LETTERS AND WHITE ALUMINUM HOUSING (18.5" WIDE)	EVENLITE TLA-AC-R1-W	LED			ELECTRONIC	120/277	5	(2)(3)(1)
E2	WALL MOUNTED TWIN HEAD (7W EACH) EMERGENCY LIGHTING UNIT WITH MAINTENANCE FREE SEALED LEAD CALCIUM BATTERY	EVENLITE P2E28-PW67-US	7.2W TUNGSTEN			ELECTRONIC	120/277	15	(2)(7)
F	PENDANT MOUNTED 22' DIA. INDUSTRIAL LED FIXTURE WITH CLEAR ACRYLIC REFRACTOR & BOTTOM LENS AND WHITE HOUSING (13,000 LUMEN PACKAGE)	SPECTRUM LIGHTING PRDCH22LEDLX30-L40-DSI01DMPR22PPMW	LED	4000K		DIMMING	120	120	
F1	SAME AS TYPE 'F' EXCEPT 10,000 LUMEN PACKAGE	SPECTRUM LIGHTING PRDCH22LEDLX00-L40-DSI01DMPR22PPMW	LED	4000K		DIMMING	120	90	
G	SURFACE MOUNTED 4' LINEAR LED FIXTURE WITH FROSTED LENS, CORNER MOUNTING BRACKET AND DAMP LOCATION LISTED (7000 LUMEN PACKAGE)	KENALL LIGHTING "LHA8-48-F-MW-PP-ST-40K-DCC-DV-DL-CMB	LED	4000K		DIMMING	120	70	
G1	SAME AS TYPE 'G' EXCEPT 5000 LUMEN PACKAGE AND NO CORNER MOUNTING BRACKET	KENALL LIGHTING "LHA8-48-F-MW-PP-48-40K-DCC-DV-DL	LED	4000K		ELECTRONIC	120	50	
H	RECESSED 6IN. DIA. OPEN LED DOWN LIGHT 'SHOWER LIGHT' WITH WHITE TRIM & REFLECTOR AND OPAL ACRYLIC LENS (1000 LUMEN PACKAGE)	LIGHTOLIER LBRAZOLWA + LSR08040VA / LSRDW	LED	4000K		ELECTRONIC	120	15	

LIGHT FIXTURE NOTES:

1. NOT USED
2. PROVIDE W/ FEATURES AND ACCESSORIES NECESSARY FOR UNIVERSAL MOUNTING AND DIRECTIONAL ARROW KNOCKOUTS. ARROWS ON PLANS INDICATE DIRECTION OF CHEVRONS. SHADING INDICATES QUANTITY AND LOCATION OF FIXTURE FACE.
3. ALL EXTERIOR FIXTURES AND INTERIOR FIXTURES IN UNHEATED SPACES SHALL BE CAPABLE OF OPERATING IN COLD TEMP (0° F).
4. ALL ELECTRONIC DRIVERS SHALL HAVE A MAXIMUM TOTAL HARMONIC DISTORTION OF TEN PERCENT (10%).
5. COLOR OF ALL LAMPS SHALL BE 4000K UNLESS OTHERWISE NOTED.
6. FURNISH ALL ADDITIONAL MATERIALS AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION TO BE FULLY OPERATIONAL.
7. FURNISH WITH NICKEL CADMIUM BATTERY FOR MINIMUM 90 MINUTE EMERGENCY LIGHTING OPERATION.
8. FIXTURE SHALL BE MADE UP OF TWO SIGNS MOUNTED SIDE BY SIDE. ONE SIGN WILL HAVE THE WORDING 'EXIT' AND THE OTHER WILL HAVE THE HANDICAP LOGO.
9. ALL EQUALS MUST BE APPROVED BY THE ER, ELECTRICAL DESIGNER. A POINT BY POINT CALCULATION MUST BE PROVIDED FOR BOTH INTERIOR AND EXTERIOR SPACES. THERE WILL BE NO EXCEPTIONS GRANTED. EVERY MODEL HAVE BEEN BASED ON PRODUCT SHOWN. ANY ALTERNATES SUBMITTED MUST NOT CONSUME MORE THEN THE WATTAGE SHOWN ON THE FIXTURE SCHEDULE. THERE WILL BE NO EXCEPTIONS GRANTED. ALTERNATE EQUALS MAY VARY IN APPEARANCE AND AESTHETICS PROVIDED THEY MEET THE PERFORMANCE REQUIREMENTS SHOWN ON FIXTURE SCHEDULE (FINAL APPROVAL BY ELECTRICAL DESIGNER AND ARCHITECT). POINT BY POINT CALCULATIONS WILL BE REQUIRED AS PART OF THE PRODUCT SUBMITTAL PACKAGE SUBSEQUENT TO BIDDING AND SUBSTITUTION REQUESTS.
10. CONTRACTOR TO INCLUDE IN THEIR BASE BID THE FOLLOWING EXTRAS:
    - 10 PIECES - OCCUPANCY SENSORS
    - 10 PIECES - POWER PACKS - DUAL CIRCUIT.
    - 10 PIECES - WALL SWITCH WITH J-BOX.
    - 10 PIECES - J-BOXES INSTALLED.
    - 10 PIECES - ROOM CONTROLLER.
    - 05 PIECES - EXIT SIGN (CARRY MOST EXPENSIVE).
11. HANDICAP LOGO AND LETTERS SHALL BE A MINIMUM OF 6' HIGH WITH THE LETTERS PRINCIPAL STROKES NOT LESS THAN ⅞" WIDE AND SHALL BE MOUNTED TO THE FACE OF THE DOOR (KICK PLATE) AT LEAST 6' ABOVE AND NOT MORE THAN 18' ABOVE THE FLOOR. WHEN THE SIGN IS FULLY CHARGED IT WILL ILLUMINATE FOR UP TO 10 HOURS WITHOUT AN EXTERNAL SOURCE.

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title: LIGHT FIXTURE SCHEDULES

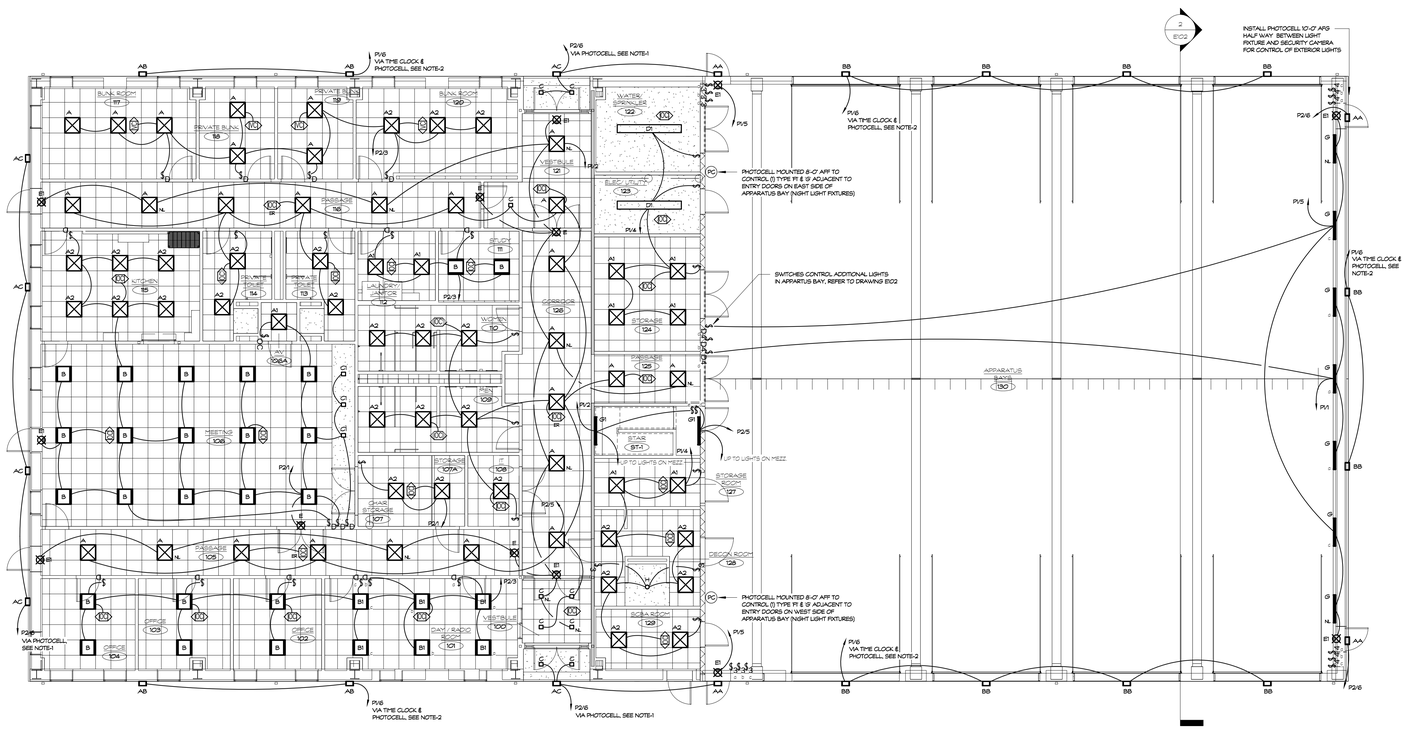
100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: SEC
Project Number: 13.220

Drawing Number: E002

GENERAL NOTES:

1. CONTRACTOR SHALL WIRE ALL LIGHTS INDICATED TO THE BUILDING MOUNTED PHOTOCELL TO CONTROL THE LIGHTS. THESE FIXTURES WILL BE ENERGISED FROM DUSK TO DAWN.
2. CONTRACTOR SHALL WIRE ALL LIGHTS INDICATED TO THE BUILDING MOUNTED PHOTOCELL & SMART TIME CLOCK (LOCATED IN THE ELECTRIC ROOM) TO CONTROL THESE LIGHTS AND POLE MOUNTED SITE LIGHTS. THE SMART TIME CLOCK WILL DIM ALL THE LIGHTS LIGHTS DOWN 50% DURING OFF HOURS.



1 E01 MAIN LEVEL LIGHTING PLAN
SCALE: 1/8" = 1'-0"

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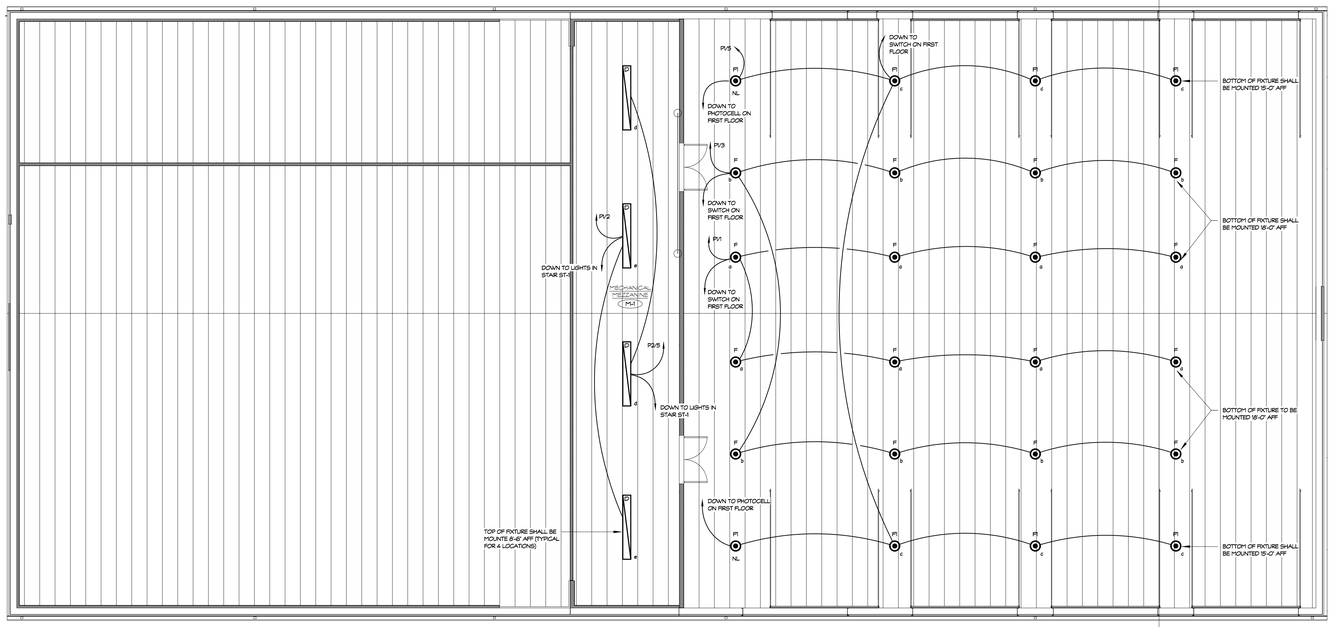
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title: MAIN LEVEL LIGHTING PLAN

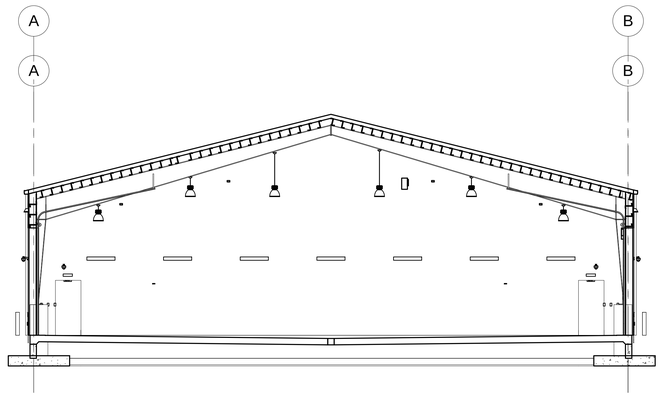
Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: SEC
Project Number: 13.220

Drawing Number: E101

100% CD Submission



1 E102 MECHANICAL MEZZANINE LIGHTING PLAN
SCALE: 1/8" = 1'-0"



2 E102 Section 1 - Apparatus Bays
SCALE: 1/8" = 1'-0"

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MEZZANINE LEVEL LIGHTING PLAN

100% CD Submission

Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: SEC
Project Number: 13.220

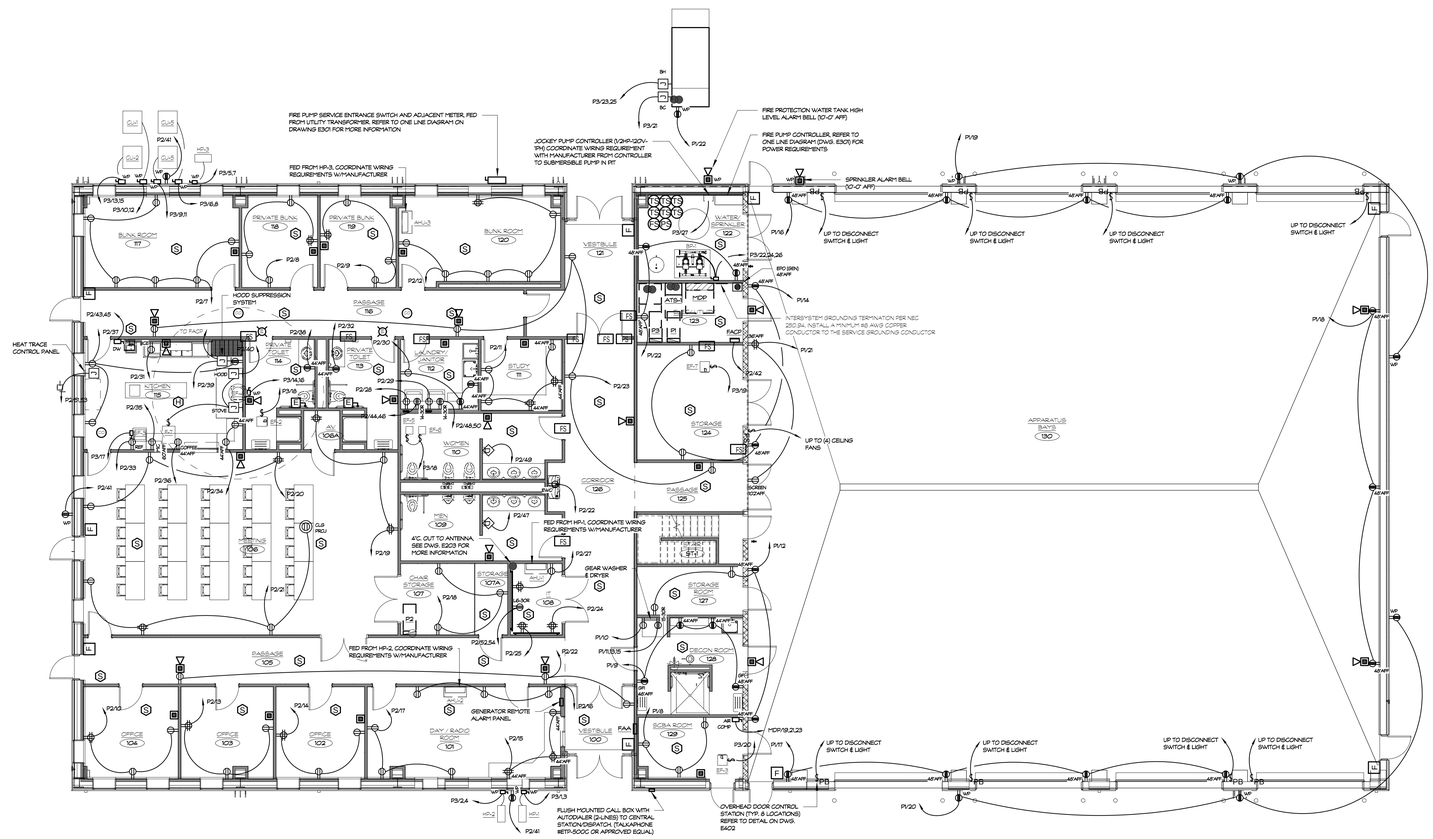
Drawing Number: E102

POWER PLAN NOTES:

1. PROVIDE A COMPLETE HANDICAP CALL FOR AID SYSTEM, REFER TO DETAIL ON DRAWING E401. WIRE SYSTEM TO LOCAL BRANCH CIRCUIT SERVING RECEPTACLES IN CORRIDOR OUTSIDE OF ROOM, NOT FROM RECEPTACLE IN ROOM.

2. AH-1,5 ARE PART OF A SPLIT SYSTEM WITH CORRESPONDING HEAT PUMP (HP-X). THIS EQUIPMENT HAS A SINGLE POINT CONNECTION AT THE HEAT PUMP. THE AHU IS FED FROM THE HEAT PUMP. COORDINATE WIRING REQUIREMENTS WITH APPROVED MANUFACTURER.

3. CONTRACTOR SHALL COORDINATE EXACT RECEPTACLE(S) REQUIRED FOR OWNER FURNISHED-RELOCATED EQUIPMENT AND PROVIDE RECEPTACLE TO MATCH EXISTING PLUG.



1 E201 MAIN LEVEL POWER PLAN
SCALE: 1/8" = 1'-0"

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MAIN LEVEL POWER - ELECTRICAL

100% CD Submission

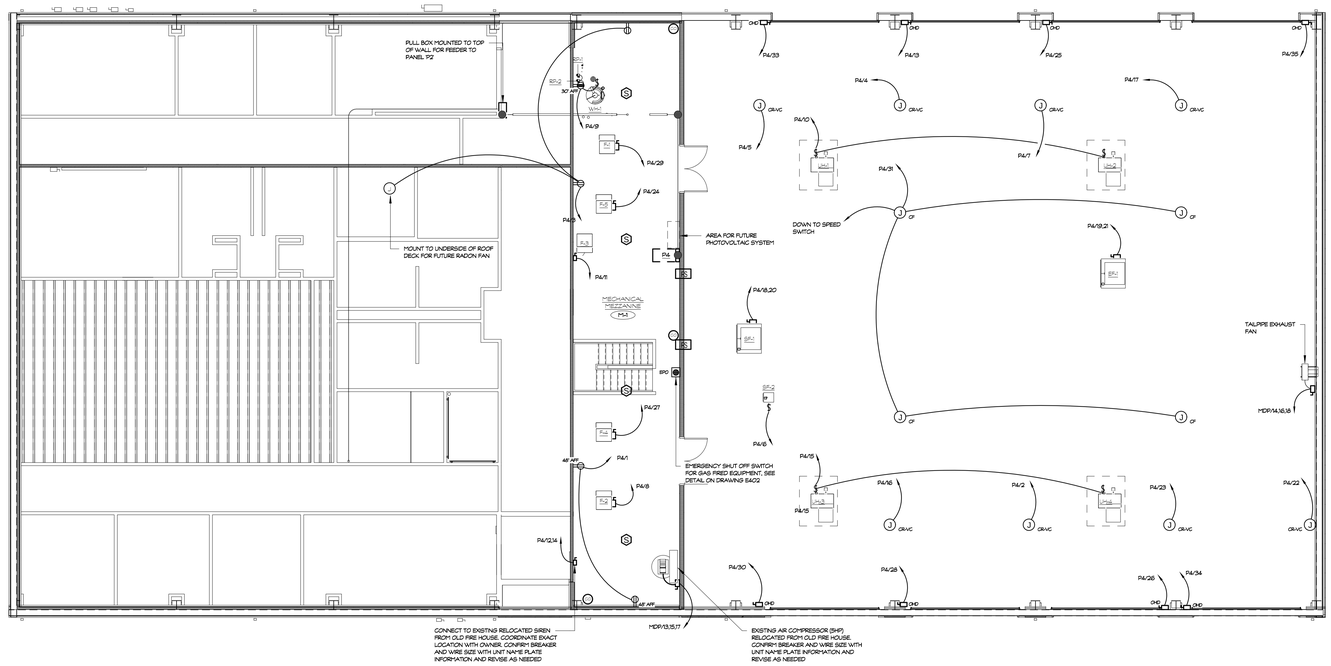
Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: SEC
Project Number: 13.220

Drawing Number: E201

POWER PLAN NOTES:

1. CONTRACTOR SHALL CONFIRM EXISTING POWER REQUIREMENTS OF RELOCATED AIR COMPRESSOR AND REVISE CIRCUIT BREAKER & WIRING AS NEEDED.

2. CONTRACTOR SHALL CONFIRM EXISTING POWER REQUIREMENTS FOR THE RELOCATED SIREN AND REVISE CIRCUIT BREAKER & WIRING AS NEEDED. COORDINATE WITH OWNER LOCATION(S) OF CONTROL STATION TO OPERATE SIREN.



1 E202 MECHANICAL MEZZANINE POWER PLAN
SCALE: 1/8" = 1'-0"

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

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Architects / Engineers / Interior Designers
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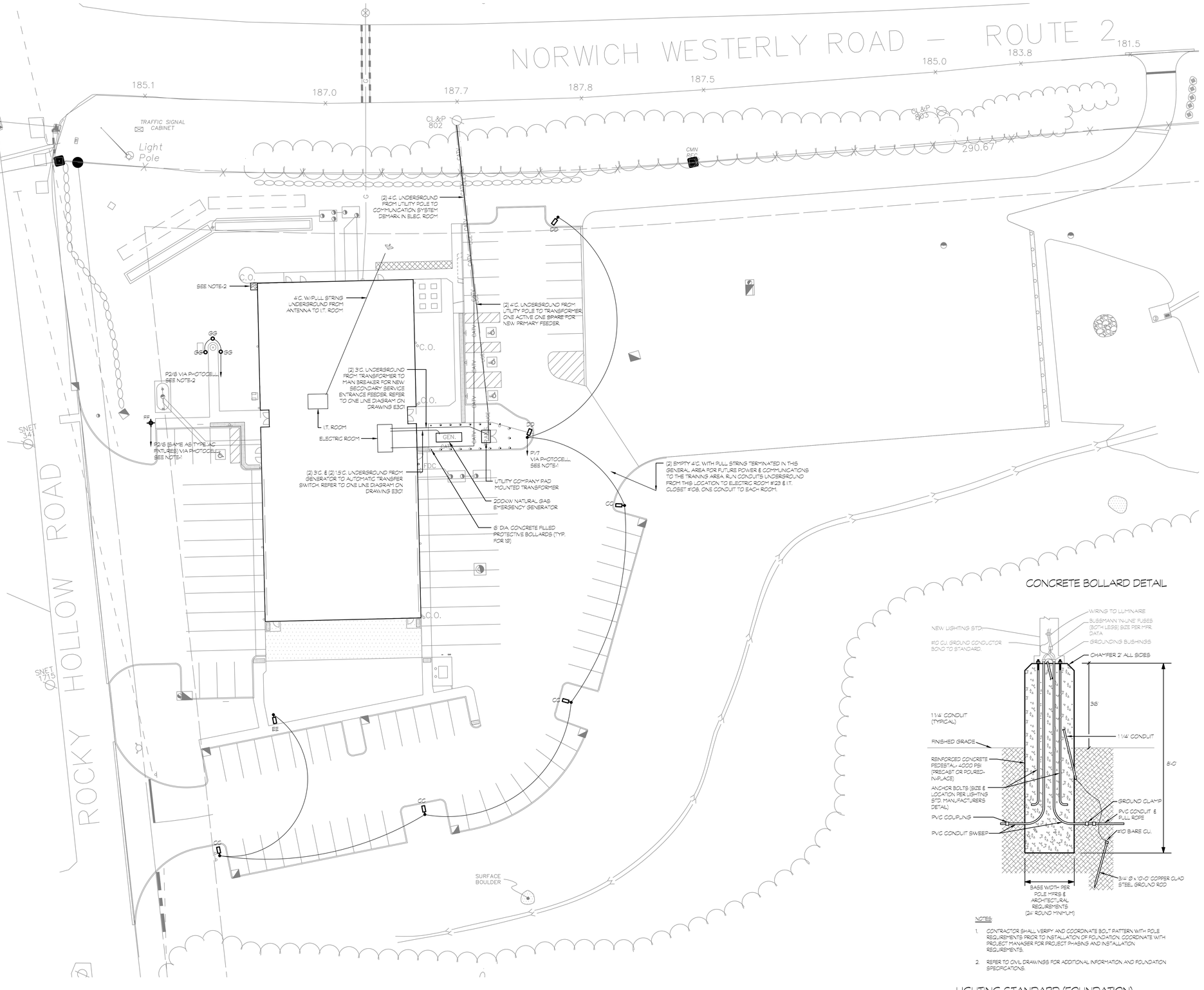
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MEZZANINE LEVEL POWER - ELECTRICAL

100% CD Submission

Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: SEC
Project Number: 13.220

Drawing Number: E202

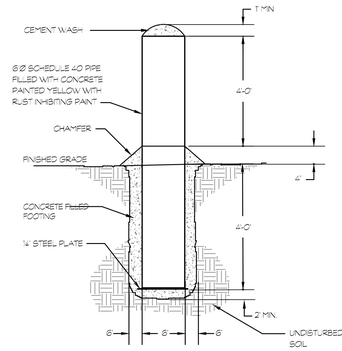


1 E203 ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"

GENERAL NOTES

1. CONTRACTOR SHALL WIRE ALL POLE LIGHTS TO THE BUILDING MOUNTED PHOTOCELL & SMART TIME CLOCK FOR CONTROL. THE SMART TIME CLOCK WILL DIM THE LIGHTS DOWN 50% DURING OFF HOURS.
2. CONTRACTOR SHALL INSTALL A DEDICATED PHOTOCELL FOR THE FLAG POLE LIGHTS AT THE NORTH WEST CORNER OF BUILDING AT 10'-0" AFG. COORDINATE EXACT LOCATION WITH SECURITY CAMERAS MOUNTED IN THIS AREA.





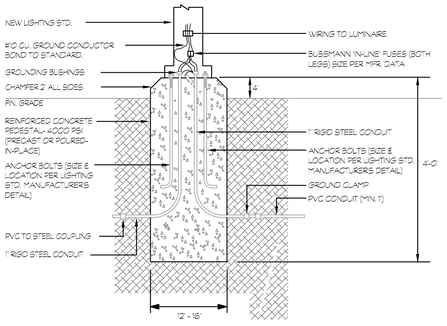
CONCRETE FILLED PROTECTIVE BOLLARD DETAIL
2 E203
SCALE: NONE

CONCRETE BOLLARD DETAIL

NOTES:

1. CONTRACTOR SHALL VERIFY AND COORDINATE BOLT PATTERN WITH POLE REQUIREMENTS PRIOR TO INSTALLATION OF FOUNDATION. COORDINATE WITH PROJECT MANAGER FOR PROJECT PHASING AND INSTALLATION REQUIREMENTS.
2. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION AND FOUNDATION SPECIFICATIONS.

LIGHTING STANDARD (FOUNDATION) DETAIL - 36" EXPOSED CONCRETE
3 E203
SCALE: NONE



BOLLARD LIGHT FIXTURE - CONCRETE BASE DETAIL (TYPE 'FF')
4 E203
SCALE: NONE

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

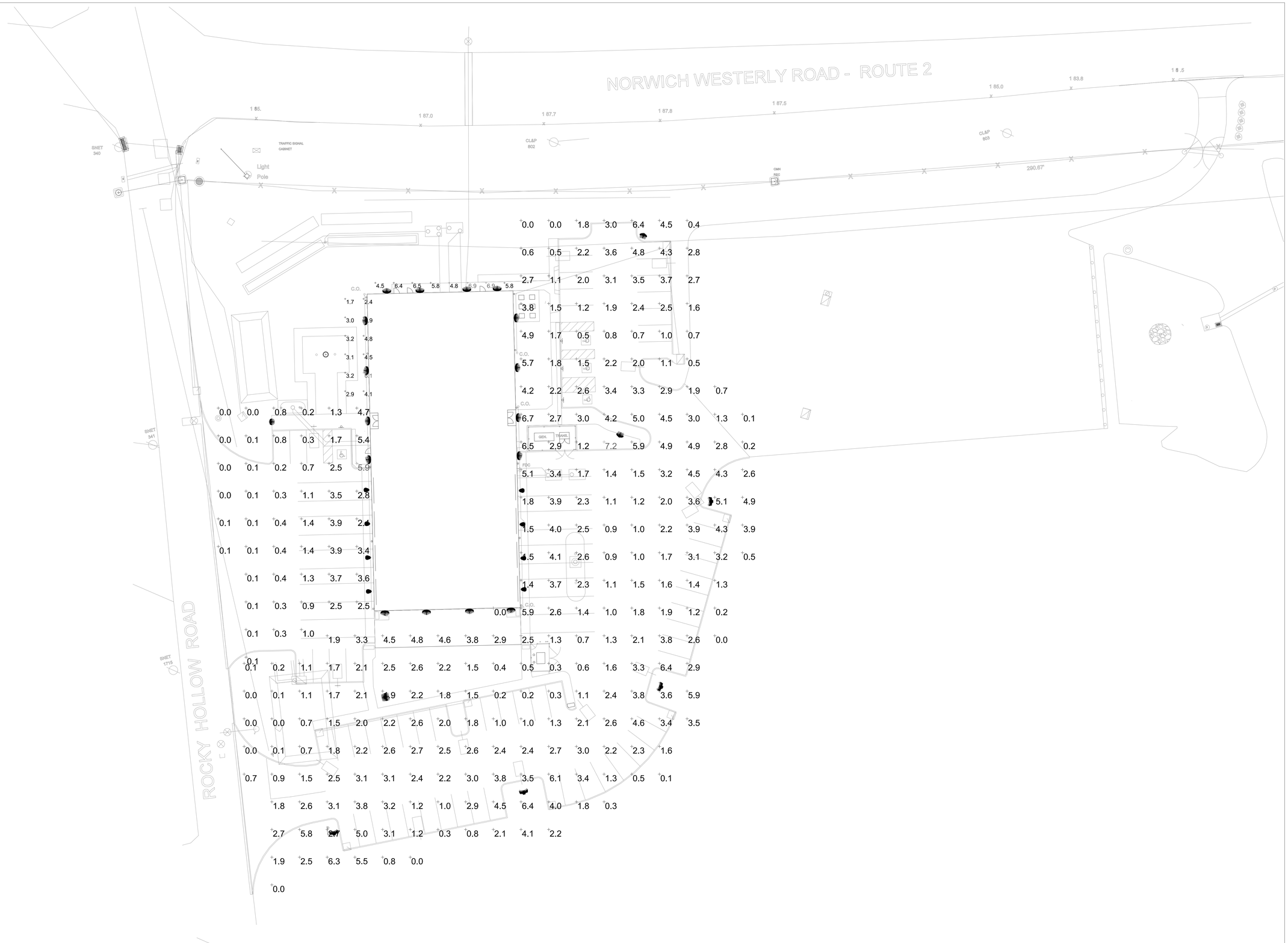
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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
ELECTRICAL SITE PLAN

100% CD Submission

Date: 12/1/16
Scale: 1" = 20'-0"
Drawn By: SEC
Project Number: 13.220
Drawing Number: E203



Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
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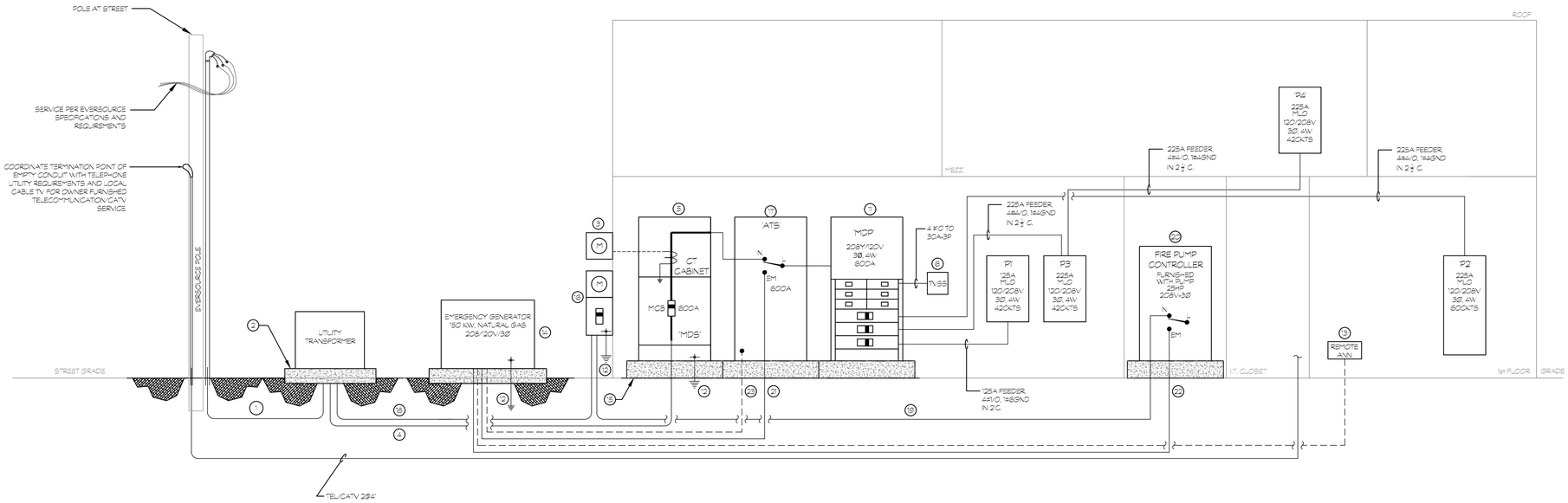
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

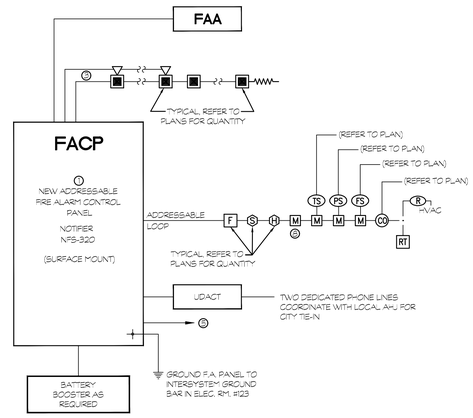
Drawing Title:
ELECTRICAL SITE LIGHTING
POINT BY POINT CALCULATION

100% CD Submission

Date: 12/16
Scale: 1" = 20'-0"
Drawn By: SEC
Project Number: 13220

Drawing Number:
E203a





FIRE ALARM RISER DIAGRAM

NTS

1. REFER TO SPECIFICATION 283111 FOR SYSTEM REQUIREMENTS.
2. PANEL WILL BE FURNISHED WITH DIALER FOR FIRE SERVICE NOTIFICATION. PROVIDE TWO PHONE LINES FROM DEMARK.
3. PROVIDE WIRING AS REQUIRED TO ALLOW FOR SILENCING OF AUDIBLE DEVICES WITH STROBES STILL ACTIVE. ALL STROBES SHALL BE SYNCHRONIZED.
4. SEPARATE BUILDING INTO A MINIMUM OF 2 LOGICAL SECTIONS BY USE OF NOTIFIER ISO-X FAULT ISOLATOR MODULES.
5. PROVIDE 120V, 20A DEDICATED BRANCH CIRCUIT WITH BREAKER LOCK.
6. ALL WIRING TO BE PER SPECIFICATIONS AND MANUFACTURER'S REQUIREMENTS.
7. FURNISH DEVICES WITH ALL NECESSARY MATERIALS AND ACCESSORIES FOR COMPLETE INSTALLATION TO BE FULLY OPERATIONAL.
8. FURNISH AND INSTALL MONITORING MODULE FOR MONITORING ALARM CONTACTS IN THE FOLLOWING: (1) EMERGENCY GENERATOR, (4) FIRE PUMP CONTROLLER, (1) KITCHEN HOOD SUPPRESSION SYSTEM, (1) OUTDOOR TANK HIGH WATER ALARM AND (1) FOR FIRE PUMP WATER TANK MONITORING SYSTEM.
9. CONTRACTOR SHALL COORDINATE LOCATION OF ALL DUCT SMOKE DETECTORS, SMOKE DAMPERS AND FIRE-SMOKE DAMPERS WITH MECHANICAL CONTRACTOR. ALL DEVICES SHALL BE WIRED TO THE FIRE ALARM SYSTEM.
10. MOUNT BOTTOM OF NOTIFICATION DEVICES 80" AFF OR 6" BELOW CEILING, WHICH EVER IS LOWER. MOUNT TOP OF PULL STATIONS TO 48" AFF.
11. PROVIDE FRAMED BUILDING LAYOUT ADJACENT TO REMOTE ANNUNCIATOR PANEL.
12. REFER TO POWER PLANS TO CONFIRM DEVICE QUANTITIES. ALL FIRE ALARM WORK SHALL BE INCLUDED IN THE BASE BID.

FIRE ALARM LEGEND

FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL	AFP-200 (SURFACE)
UDACT	DIGITAL DIALER W/ TWO PHONE LINES	UCD-80
FAA	REMOTE FIRE ALARM ANNUNCIATOR PANEL	LCD-80/ABS-17/AKS-1
	ADA WALL MOUNT HORN/STROBE (OUTDOOR RATED WHERE MARKED W/P)	P2224MC
	ADA WALL MOUNT STROBE	S2224MC
F	ADDRESSABLE MANUAL FIRE ALARM PULL STATION - DUAL ACTION MOUNT AT 48" AFF, W/ KEY RESET.	NBG-12LX
S	ADDRESSABLE PHOTOELECTRIC AREA SMOKE DETECTOR	FSP-851
H	ADDRESSABLE HEAT DETECTOR 135°F FIXED PLUS RATE OF RISE	FST-851R
C	CONTACTS IN GENERATOR CONTROL PANEL. PROVIDE ADDRESSABLE MODULE FOR MONITORING	FRM-1
R	INTELLIGENT RELAY	FRM-1/CM-3600
S	ADDRESSABLE DUCT SMOKE DETECTOR W/ SAMPLING TUBE, REMOTE TEST SWITCH AND PHOTOELECTRIC HEAD.	FSD-751RPL
RT	REMOTE TEST STATION	RTS451
R HVAC	HVAC EQUIPMENT SHUT-DOWN MODULE	FRM-1
	END OF LINE RESISTOR	
TS	TAMPER SWITCH	
FS	FLOW SWITCH	
PS	PRESSURE SWITCH	
CO	CARBON MONOXIDE DETECTOR	

CONDUCTOR AND CONDUIT SIZING TABLE

CIRCUIT BREAKER	CONDUCTOR (THWN/THHN)	CONDUIT SIZE
20,25 AMP	#12 + #12 GND	3/4"
30,35 AMP	#10 - #10 GND	3/4"
40,45,50 AMP	#8 - #10 GND	1"
60 AMP	#6 - #10 GND	1"
70,80 AMP	#4 + #8 GND	1"
90 AMP	#3 + #8 GND	1 1/4"
100 AMP	#2 - #8 GND	1 1/4"
125 AMP	#1 - #6 GND	1 1/2"
150 AMP	#1/0 - #6 GND	1 1/2"
175 AMP	#2/0 - #6 GND	2"
200 AMP	#3/0 - #6 GND	2"
225 AMP	#4/0 + #4 GND	2 1/2"
250 AMP	#250 + #4 GND	2 1/2"
400 AMP	#600 + #3 GND	4"
600 AMP	(2 SETS) #350 + #1 GND	(2) 3"
800 AMP	(2 SETS) #500 + #1/0 GND	(2) 4"

NOTE 1. ALL VALUES BASED ON COPPER CONDUCTORS.
2. FEEDERS
UPGRADE WIRE TO MAINTAIN MAXIMUM OF 2% VOLTAGE DROP.
BRANCH CIRCUITS
UPGRADE WIRE TO MAINTAIN MAXIMUM OF 3% VOLTAGE DROP.
3. NUMBER OF WIRES SHALL BE DETERMINED WITH EQUIPMENT ELECTRICAL NAMEPLATE CHARACTERISTICS.
4. WHERE NEUTRALS ARE REQUIRED, IT SHALL MATCH FEEDER CONDUCTOR SIZE.

ELECTRICAL 1-LINE RISER DIAGRAM

NTS

1. PROVIDE TWO 4" GRS CONDUITS UNDERGROUND FROM EXISTING UTILITY POLE TO TRANSFORMER PAD FOR ELECTRICAL SERVICE PRIMARY. CONTRACTOR SHALL PROVIDE PULL LINE IN ALL CONDUITS. PRIMARY CABLE WILL BE FURNISHED & INSTALLED BY EVERSOURCE.
2. CONTRACTOR SHALL PROVIDE EVERSOURCE APPROVED, PRECAST CONCRETE TRANSFORMER PAD. PROVIDE 8 GROUND RODS & #4/0 AWG GROUND GRID AT PAD. PROVIDE LUGS FOR SECONDARY SERVICE TERMINATION.
3. CURRENT TRANSFORMERS, METER & CONNECTING WIRING SHALL BE FURNISHED & INSTALLED BY EVERSOURCE. CONTRACTOR SHALL FURNISH & INSTALL CONDUIT AND CT METER SOCKET IN COMPLIANCE WITH UTILITY SPECIFICATIONS. COORDINATE METER LOCATION WITH OWNER & EVERSOURCE.
4. PROVIDE SECONDARY SERVICE FROM UTILITY TRANSFORMER TO MDP, LOCATED IN FIRST FLOOR ELECTRICAL ROOM. USE 2 SETS OF 3#350KCMIL + #6G IN 3" CONDUIT.
5. FURNISH & INSTALL NEW COMBINATION SERVICE MAIN DISCONNECT SWITCH/METERING/CT CABINET, 208Y/120V, 3Ø, 4 WIRE. FURNISH & INSTALL 600 AMP, 208V, 3Ø, MAIN CIRCUIT BREAKER WITH 65,000 AIC MINIMUM INTERRUPTING CAPACITY. USE CUTLER-HAMMER "KSMLD4600" OR EQUAL.
6. FURNISH & INSTALL TRANSIENT VOLTAGE SURGE SUPPRESSOR NEMA 12 TYPE, INDOOR WITH 280 KA SURGE RATING. USE CUTLER-HAMMER, INTERMATIC OR EQUAL.
7. REFER TO CONDUCTOR AND CONDUIT SIZING TABLE FOR FEEDER REQUIREMENTS. ALL WIRING BY ELECTRICAL CONTRACTOR.
8. SEAL ALL CONDUITS AS REQUIRED BY CODE.
9. PROVIDE PULL STRINGS AND CONDUIT END COVERS FOR ALL SPARE OR EMPTY CONDUITS.
10. PROVIDE BLACK PAINTED PLYWOOD BACKBOARD. ANCHOR AS REQUIRED FOR SEISMIC LOAD.
11. FURNISH & INSTALL MAIN DISTRIBUTION PANEL, 208Y/120V, 3Ø, 4 WIRE, 600 A. USE CUTLER-HAMMER PRL4 OR EQUAL. FURNISH WITH BREAKERS SHOWN IN MDP LAYOUT. PANELBOARD SHALL HAVE MINIMUM 20% SPARE SPACE.
12. FURNISH & INSTALL SERVICE GROUND PER NEC ARTICLE 250 AND UTILITY REQUIREMENTS. CONNECT TO COLD WATER PIPE & PROVIDE GROUND ROD. ALSO CONNECT GROUND TO REBAR ENCASED IN CONCRETE.
13. PROVIDE (1) 1 1/2"C. 2#12, 1#12, 1#8, 1"C FOR GENERATOR REMOTE ANNUNCIATOR LOCATED IN DAY/RADIO ROOM #101.
14. FURNISH & INSTALL 150 KW NATURAL GAS GENERATOR WITH WEATHERPROOF ENCLOSURE, AND TWO OUTPUT BREAKERS (600A-BLDG & 175A-FIRE PUMP). REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
15. CONTRACTOR SHALL PROVIDE 3' HIGH POURED CONCRETE PAD. COORDINATE WITH GC FOR DIVISION OF RESPONSIBILITY AND COMPLY WITH CONCRETE SPECIFICATIONS.
16. PROVIDE A 400A - 208V - 3Ø SERVICE RATED SWITCH AND IN-LINE METER (EVERSOURCE APPROVED) FOR THE "NORMAL" FEED TO THE FIRE PUMP.
17. PROVIDE 600A AUTOMATIC TRANSFER SWITCH TO BE PURCHASED FROM SAME GEN SET MANUFACTURER. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
18. FURNISH AND INSTALL FEEDER FROM UTILITY TRANSFORMER TO SERVICE SWITCH (3 #3/0 + #6G IN 2"C.)
19. FURNISH AND INSTALL FEEDER FROM SERVICE SWITCH TO FIRE PUMP CONTROLLER LOCATED IN WATER/SPRINKLER ROOM #122 WITH 4 #3/0 + #4G IN 2"C.
20. FIRE PUMP CONTROLLER WITH INTEGRAL TRANSFER SWITCH FURNISHED BY PUMP MANUFACTURER (25HP - 208V - 3Ø). PROVIDE ALL REQUIRED WIRING CONNECTIONS. COORDINATE WITH PUMP MANUFACTURER.
21. FURNISH AND INSTALL FEEDER FROM 600A GENERATOR OUTPUT BREAKER TO ATS IN ELECTRIC ROOM #123 WITH 2 SETS OF 4 #350KCMIL + #2G IN 3"C.
22. FURNISH AND INSTALL FEEDER FROM 175A GENERATOR OUTPUT BREAKER TO FIRE PUMP CONTROLLER/TRANSFER SWITCH IN SPRINKLER ROOM #108 WITH 4 #3/0 + #4G IN 2"C.
23. FURNISH AND INSTALL (2) 1" C. FROM GENERATOR TO AUTOMATIC TRANSFER SWITCH FOR ENGINE START AND ALL REQUIRED CONTROL WIRING.

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New Center for Emergency Services
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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
ELECTRICAL ONE LINE DIAGRAM

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: SEC
Project Number: 13.220
Drawing Number: E301

Branch Panel: MDP

Location: ELEC/ UTILITY 123
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 65,000
Mains Type:
Mains Rating: 600 A
MCB Rating:

Notes:

CKT	Circuit Description	Wire & Conduit	Trip	Poles	A	B	C	Poles	Trip	Wire & Conduit	Circuit Description	CKT
1	P4		225 A	3	14720 19747			3	225 A		P2	2
3	--	--	--	--		14538 19458		--	--	--	--	4
5	--	--	--	--			14276 19870	--	--	--	--	6
7	P1		125 A	3	7076 14518			3	225 A		P3	8
9	--	--	--	--		7506 15302		--	--	--	--	10
11	--	--	--	--			6044 16698	--	--	--	--	12
13	Exist. Air Compressor		40 A	3	2040 2880			3	50 A		Tailpipe Exhaust Fan	14
15	--	--	--	--		2040 2880		--	--	--	--	16
17	--	--	--	--			2040 2880	--	--	--	--	18
19	SBCA - Air Comp		40 A	3	3328							20
21	--	--	--	--		3328						22
23	--	--	--	--			3328					24
25												26
27												28
29												30
31												32
33												34
35												36
37												38
39												40
41												42
			Total Load:		64309 VA	65052 VA	65136 VA					
			Total Amps:		536 A	543 A	544 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	4711 VA	125.00%	5889 VA		
Other	10585 VA	101.70%	10765 VA	**Total Conn. Load:**	194497 VA
Power	175751 VA	100.00%	175751 VA	**Total Est. Demand:**	195855 VA
Appliance - Dwelling Unit	3450 VA	100.00%	3450 VA	**Total Conn. Current:**	540 A
				Total Est. Demand Current:	544 A

Notes:

Branch Panel: P1

Location: ELEC/ UTILITY 123
Supply From: MDP
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type:
Mains Rating: 125 A
MCB Rating:

Notes:

CKT	Circuit Description	Wire & Conduit	Trip	Poles	A	B	C	Poles	Trip	Wire & Conduit	Circuit Description	CKT
1	Lighting		20 A	1	1185 435			1	20 A		Lighting	2
3	Lighting		20 A	1		960 610		1	20 A		Lighting	4
5	Lighting		20 A	1			1040 888	1	20 A		Lighting	6
7	Site Lighting	2 #10 + #10G - 1"C.	20 A	1	980 540			1	20 A		Receptacles	8
9	Receptacles		20 A	1		720 1100		1	20 A		Recept. (Gear Washer)	10
11	Recept. (Gear Dryer)	3 #10 + #10G - 3/4"C.	30 A	3			2136 720	1	20 A		Receptacles	12
13	--	--	--	--	2136 720			1	20 A		Receptacles	14
15	--	--	--	--		2136 720		1	20 A		Receptacles	16
17	Receptacles		20 A	1			720 540	1	20 A		Receptacles	18
19	Receptacles		20 A	1	540 540			1	20 A		Receptacles	20
21	Receptacles		20 A	1		540 720		1	20 A		Receptacles	22
23												24
25												26
27												28
29												30
31												32
33												34
35												36
37	Spare		20 A	1	0 0			1	20 A		Spare	38
39	Spare		20 A	1		0 0		1	20 A		Spare	40
41	Spare		20 A	1			0 0	1	20 A		Spare	42
			Total Load:		7076 VA	7506 VA	6044 VA					
			Total Amps:		60 A	64 A	50 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	1590 VA	125.00%	1988 VA		
Other	3528 VA	100.85%	3558 VA	**Total Conn. Load:**	20626 VA
Power	15508 VA	100.00%	15508 VA	**Total Est. Demand:**	21054 VA
				Total Conn. Current:	57 A
				Total Est. Demand Current:	58 A

Notes:

Branch Panel: P2

Location: CHAIR STORAGE 107
Supply From: MDP
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MLO
Mains Rating: 225 A
MCB Rating:

Notes: Provide single section panel, not two section.

CKT	Circuit Description	Wire & Conduit	Trip	Poles	A	B	C	Poles	Trip	Wire & Conduit	Circuit Description	CKT
1	Lighting		20 A	1	1101 0			1	20 A		Spare	2
3	Lighting		20 A	1		950 0		1	20 A		Spare	4
5	Lighting		20 A	1			1030 565	1	20 A		Lighting	6
7	Receptacles		20 A	1	1080 900			1	20 A		Receptacles	8
9	Receptacles		20 A	1		900 720		1	20 A		Receptacles	10
11	Receptacles		20 A	1			1260 1260	1	20 A		Receptacles	12
13	Receptacles		20 A	1	720 720			1	20 A		Receptacles	14
15	Receptacles		20 A	1		900 540		1	20 A		Receptacles	16
17	Receptacles		20 A	1			540 540	1	20 A		Receptacles	18
19	Receptacles		20 A	1	900 720			1	20 A		Receptacles	20
21	Receptacles		20 A	1		1031 720		1	20 A		Receptacles	22
23	Receptacles		20 A	1			900 360	1	20 A		Receptacles	24
25	Receptacles		20 A	1	360 0			1	20 A		Spare	26
27	Receptacles		20 A	1		540 1100		1	20 A		Recept. (Washer)	28
29	Recept. (Washer)		20 A	1			1100 540	1	20 A		Receptacles	30
31	Recept. (Ice Mach.)		20 A	1	1200 180			1	20 A		Receptacle	32
33	Recept. (Refrigerator)		20 A	1		1056 360		1	20 A		Receptacles	34
35	Recept. (Microwave)		20 A	1			1500 1500	1	20 A		Recept. (Coffee Maker)	36
37	Receptacles		20 A	1	540 180			1	20 A		Receptacle	38
39	J.B. (Hood Supp. Sys.)		20 A	1		360 570		1	20 A		J.B. (Stove & Hood) & F-7	40
41	Receptacles (Ext)		20 A	1			540 720	1	20 A		FACP	42
43	J.B. (Dishwasher)		50 A	2	3921 2750			2	30 A		Recept. (Dryer)	44
45	--	--	--	--		3921 2750		--	--	--	--	46
47	Elec. Hand Dryer		20 A	1			1725 2750	2	30 A		Recept. (Dryer)	48
49	Elec. Hand Dryer		20 A	1	1725 2750			--	--	--	--	50
51	Heat Trace Control Panel		20 A	2		640 2400		2	30 A		Recept. (L6-30R)	52
53	--	--	--	--			640 2400	--	--	--	--	54
55												56
57												58
59												60
			Total Load:		19747 VA	19458 VA	19870 VA					
			Total Amps:		165 A	162 A	166 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	3121 VA	125.00%	3902 VA		
Other	1721 VA	110.46%	1901 VA	**Total Conn. Load:**	59075 VA
Power	50783 VA	100.00%	50783 VA	**Total Est. Demand:**	60036 VA
Appliance - Dwelling Unit	3450 VA	100.00%	3450 VA	**Total Conn. Current:**	164 A
				Total Est. Demand Current:	167 A

Notes: 1. Provide a shunt-trip type circuit breaker for the breaker serving the stove and hood lights. 2. Provide a GFCI type circuit breaker for the breaker serving the heat trace control panel.

Branch Panel: P3

Location: ELEC/ UTILITY 123
Supply From: MDP
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type:
Mains Rating: 225 A
MCB Rating:

Notes:

CKT	Circuit Description	Wire & Conduit	Trip	Poles	A	B	C	Poles	Trip	Wire & Conduit	Circuit Description	CKT
1	HP-1		20 A	2	730 730			2	20 A		HP-2	2
3	--	--	--	--		730 730		--	--	--	--	4
5	HP-3		20 A	2			730 2891	2	40 A		CU-4	6
7	--	--	--	--	730 2891			--	--	--	--	8
9	CU-5		40 A	2		3130 2891		2	40 A		CU-1	10
11	--	--	--	--			3130 2891	--	--	--	--	12
13	CU-2		40 A	2	2715 790			2	20 A		EF-4	14
15	--	--	--	--		2715 790		--	--	--	--	16
17	SF-3		30 A	1			1680 836	1	20 A		EF-2, 5 & 6	18
19	EF-7		20 A	1	696 696			1	20 A		EF-3	20
21	J.B. (BC)		20 A	1		500 2640		3	40 A		BP-1	22
23	J.B. (BH)		30 A	2			1900 2640	--	--	--	--	24
25	--	--	--	--	1900 2640			--	--	--	--	26
27	Jockey Pump Control Pnl		20 A	1		1176						28
29												30
31												32
33												34
35	Spare		20 A	2			0 0	2	40 A		Spare	36
37	--	--	--	--	0 0			--	--	--	--	38
39	Spare		20 A	2		0 0		2	40 A		Spare	40
41	--	--	--	--			0 0	--	--	--	--	42
			Total Load:		14518 VA	15302 VA	16698 VA					
			Total Amps:		121 A	129 A	140 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	2228 VA	107.81%	2402 VA		
Power	44290 VA	100.00%	44290 VA	**Total Conn. Load:**	46518 VA
				Total Est. Demand:	46692 VA
				Total Conn. Current:	129 A
				Total Est. Demand Current:	130 A

Notes:

Branch Panel: P4

Location: MECHANICAL MEZZANINE M-1
Supply From: MDP
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type:
Mains Rating: 225 A
MCB Rating:

Notes:

CKT	Circuit Description	Wire & Conduit	Trip	Poles	A	B	C	Poles	Trip	Wire & Conduit	Circuit Description	CKT
1	Receptacles		20 A	1	360 500			1	20 A		J.B. (CR-VC)	2
3	Receptacles		20 A	1		610 500		1	20 A		J.B. (CR-VC)	4
5	J.B. (CR-VC)		20 A	1			500 696	1	20 A		SF-2	6
7	J.B. (CR-VC)		20 A	1	500 1920			1	40 A		F-2	8
9	WH-1,RP-1 & 2, CNP-1		20 A	1		660 1056		1	20 A		UH-1 & UH-2	10
11	F-3		20 A	1			1176 1248	2	20 A		D.S. (Exist. Siren)	12
13	D.S. (OHD)		40 A	1	1920 1248			--	--	--	--	14
15	UH-3 & UH-4		20 A	1		1056 500		1	20 A		J.B. (CR-VC)	16
17	J.B. (CR-VC)		20 A	1			500 1976	2	40 A		SF-1	18
19	EF-1		40 A	2	1976 1976			--	--	--	--	20
21	--	--	--	--		1976 500		1	20 A		J.B. (CR-VC)	22
23	J.B. (CR-VC)		20 A	1			500 1920	1	40 A		F-5	24
25	D.S. (OHD)		40 A	1	1920 1920			1	40 A		D.S. (OHD)	26
27	F-4		40 A	1		1920 1920		1	40 A		D.S. (OHD)	28
29	F-1		40 A	1			1920 1920	1	40 A		D.S. (OHD)	30
31	Power		20 A	1	480							32
33	D.S. (OHD)		40 A	1		1920 1920		1	40 A		D.S. (OHD)	34
35	D.S. (OHD)		40 A	1			1920					36
37	Spare		20 A	1	0							38
39	Spare		20 A	1		0						40
41	Spare		20 A	1			0					42
			Total Load:		14720 VA	14538 VA	14276 VA					
			Total Amps:		123 A	121 A	119 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	3108 VA	105.60%	3282 VA		
Power	40426 VA	100.00%	40426 VA	**Total Conn. Load:**	43534 VA
				Total Est. Demand:	43708 VA
				Total Conn. Current:	121 A
				Total Est. Demand Current:	121 A

Notes:

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06518-2340
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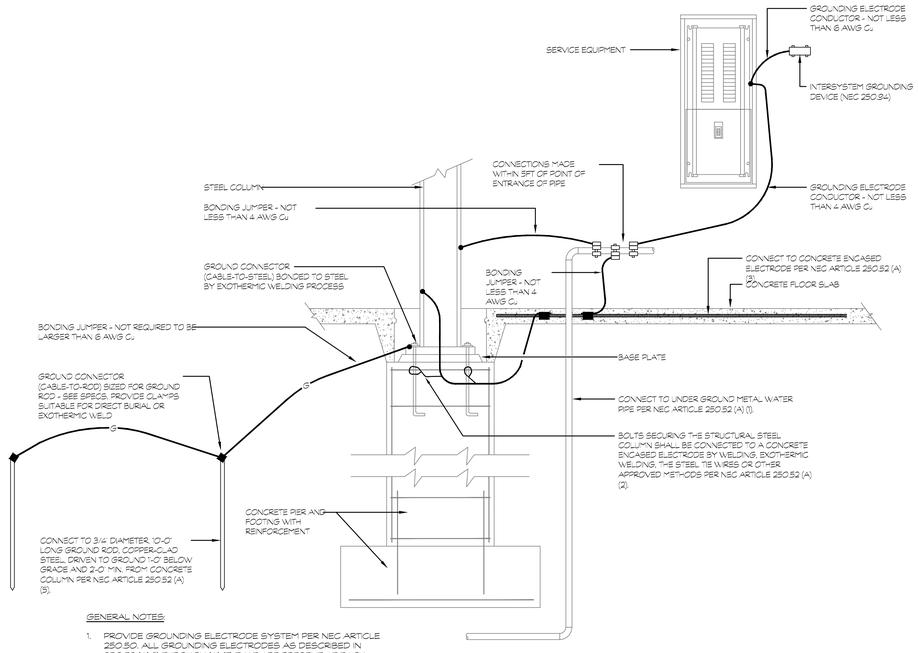
Revision:	Description:	Date:	Revised By:
REV 1	**100% CD Submission**	**1/5/17**	
REV 2	**Issued for Bidding**	**2/10/17**	

Drawing Title:
PANEL SCHEDULES

100% CD Submission

Date: 12/1/16
Scale:
Drawn By: SEC
Project Number: 13.220

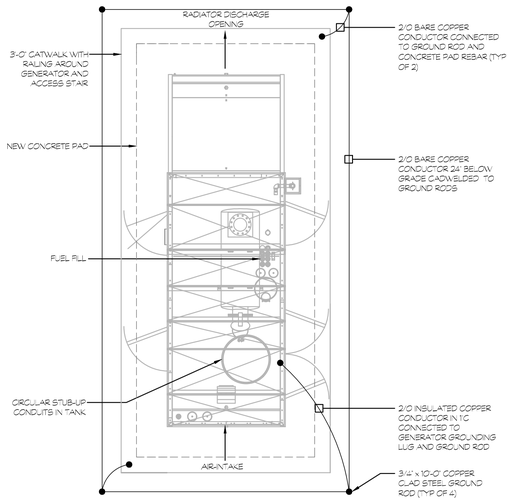
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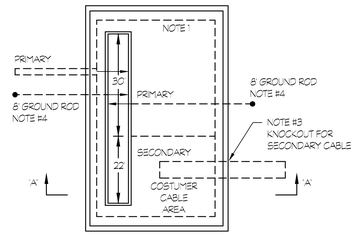
GENERAL NOTES:

1. PROVIDE GROUNDING ELECTRODE SYSTEM PER NEC ARTICLE 250.50. ALL GROUNDING ELECTRODES AS DESCRIBED IN 250.52 (A) (1) THROUGH (A) (7) THAT ARE PRESENT AT EACH BUILDING OR STRUCTURE SERVED SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM.

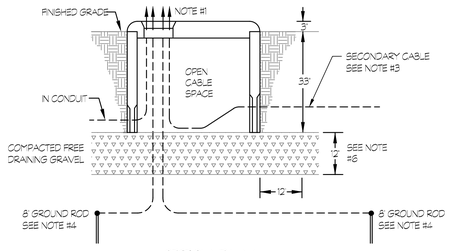
TYPICAL GROUNDING DETAIL
NTS



GENERATOR GROUNDING DETAIL
NTS



PLAN VIEW



SECTION VIEW A-A

NOTES:

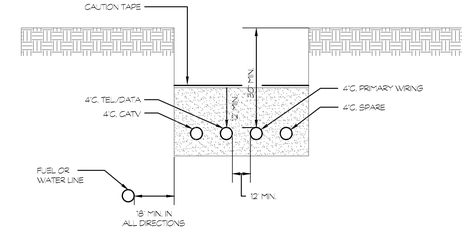
1. 75 - 300 kVA: INSTALL 78" X 54" X 36" PAD PER SPC P-013 AND P-014.

   500 - 1500 kVA: INSTALL 78" X 70" X 36" PAD PER SPC P-015 AND P-016.
2. PRIMARY CABLE:
   A. INSTALL CABLES IN CONDUIT A MINIMUM OF 30" BELOW GRADE
   B. LOOP CABLES IN CABLE VAULT BEFORE MAKING CONNECTIONS.
3. SECONDARY CABLE:

   LEAVE ENOUGH CABLE TO EXTEND 6 FEET ABOVE PAD FOR FUTURE RECONNECTING TO TRANSFORMER WITH HIGHER SECONDARY TERMINALS. CUSTOMER CABLE(S) SHALL ENTER THROUGH THE REAR KNOCKOUT AND SHALL BE CONFINED TO THE AREA DEFINED AS THE "CUSTOMER CABLE AREA".
4. GALVANIZED STEEL GROUND RODS:

   INSTALL IN TRENCH AND CONNECT #2 COPPER CONDUCTORS FROM RODS THROUGH PAD OPENING AND EXTENDING 5 FEET ABOVE PAD. MINIMUM SEPERATION OF GROUND RODS IS 8 FEET.
5. THE EXCAVATION FOR THE PAD SHALL BE CARRIED TO A DEPTH OF 12" BELOW THE BOTTOM OF THE PAD. THE BOTTOM LAYER OF BACKFILL SHALL BE COMPACTED CLEAN GRAVEL, FREE OF FOREIGN MATTER AND CONSTRUCTION DEBRIS, EXTENDING 12 INCHES BEYOND THE CIRCUMFERENCE OF THE STRUCTURE AND IN ACCORDANCE WITH CONN. D.O.T. SPEC. M.02.06 GRADING 'A'. THE REMAINING BACKFILL SHALL NOT CONTAIN ASHES, CINDER, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS, OR STONES LARGER THAN 2 INCHES IN MAXIMUM DIMENSION. IT SHALL BE PLACED IN 6" LAYERS AND COMPACTED WITH MECHANICAL TAMPERS TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD COMPACTION TESTS, AASHTO T180 OR ASTM D698.

PRECAST CONCRETE TRANSFORMER PAD DETAIL
NTS



INSTALLATION IN TRENCH

- ALL CONDUIT SHALL BE INSTALLED AT A DEPTH OF AT LEAST 30" IN THE FOLLOWING ORDER

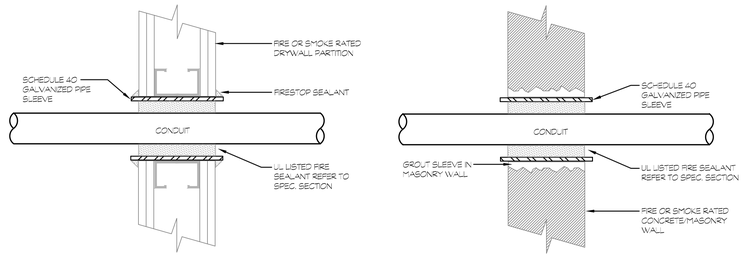
1. ENSURE THAT THE BOTTOM OF THE TRENCH IS WELL-TAMPED AND FREE OF ROCKS.
2. INSTALL THE CONDUIT, GLUING ALL COUPLINGS.
3. INSTALL SECONDARIES AND OTHER UTILITY CABLES OR CONDUITS IN THE TRENCH.
4. BACKFILL WITH 12 INCHES CLEAN FILL NOT CONTAINING STONES LARGER THAN 2 IN MAXIMUM DIAMETER.
5. INSTALL CABLE WARNING TAPE 12 INCHES OVER THE CONDUIT.
6. FILL IN THE REMAINDER OF THE TRENCH WITH NATIVE BACKFILL.
7. INSTALL PULL LINE, INCLUDING 10 FEET OF SLACK, AND SECURE TO CONDUIT PLUG AT EACH END OF CONDUIT RUN.

TRENCH DETAIL
NTS

GENERAL NOTES:

PROVIDE UL LISTED FIRE/SMOKE PENETRATION ASSEMBLY IN ACCORDANCE W/ UL479, ASTM E814 REQUIREMENTS FOR WALL TYPE, RATING, PIPE SIZE INSTALLED.

FIRE STOPPING SHALL HAVE A RATING EQUAL TO OR GREATER THAN THE WALL BEING PENETRATED - SEE SPECIFICATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR WALL RATINGS AND LOCATIONS.



WALL PENETRATION W/FIRE-SMOKE SEAL DETAIL
NTS

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers

3190 Whitney Avenue, Hamden, CT 06518-2340
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

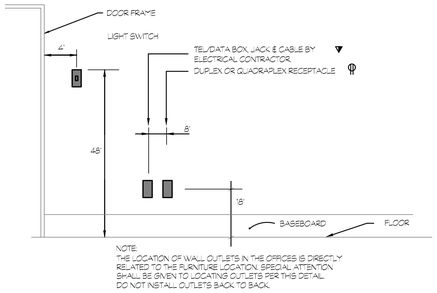
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
ELECTRICAL DETAILS

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: SEC
Project Number: 13.220

Drawing Number: E401

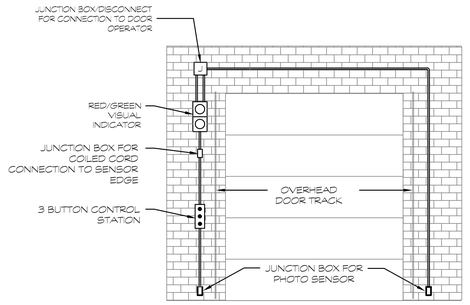


NOTE
THE LOCATION OF WALL OUTLETS IN THE OFFICES IS DIRECTLY RELATED TO THE FURNITURE LOCATION. SPECIAL ATTENTION SHALL BE GIVEN TO LOCATING OUTLETS PER THIS DETAIL. DO NOT INSTALL OUTLETS BACK TO BACK.

OUTLET MOUNTING DETAIL

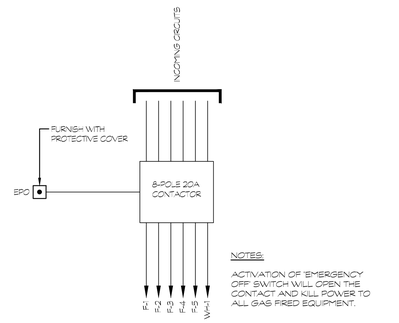
NTS

(TYP. ALL OUTLETS UNLESS OTHERWISE NOTED)



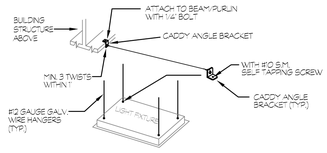
OH GARAGE DOOR ELECTRICAL ELEVATION

NTS



MECHANICAL MEZZANINE E.P.O. WIRING DIAGRAM

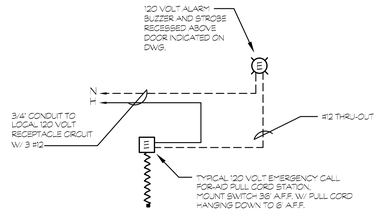
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TYPICAL LAY-IN GRID LIGHTING FIXTURE SUPPORT/MOUNTING DETAIL

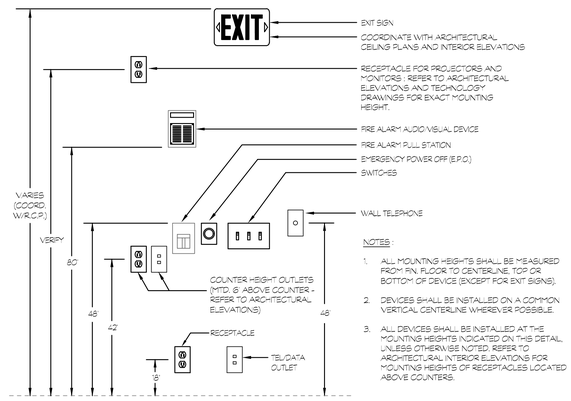
NTS

1. ALL LIGHTING FIXTURES SHALL BE SECURED TO THE STRUCTURE BY THE ELECTRICAL CONTRACTOR.
2. FLUSH OR RECESSED LIGHT FIXTURES LESS THAN 56 POUNDS SHALL HAVE 2 - 12 GA. SLACK SAFETY WIRES FROM DIAGONAL CORNERS TO BUILDING STRUCTURE BY TRADE CONTRACTOR.
3. FLUSH OR RECESSED LIGHT FIXTURES MORE THAN 56 POUNDS SHALL HAVE 4 - 12 GA. SLACK SAFETY WIRES FROM DIAGONAL CORNERS TO BUILDING STRUCTURE BY TRADE CONTRACTOR.
4. SECURE SURFACE MOUNTED LIGHT FIXTURES W/ MINIMUM OF 2 - POSITIVE CLAMPING DEVICES OF 14 GA. MINIMUM STEEL AND W/ 12 GA. WIRE TO BUILDING STRUCTURE.



HANDICAPPED CALL-FOR-AID SYSTEM

NTS



TYPICAL DEVICE MOUNTING HEIGHT DETAIL

NTS

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
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silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
ELECTRICAL DETAILS

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: SEC
Project Number: 13.220

Drawing Number: E402

GENERAL NOTES

GENERAL:

1. WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR THE MORE STRINGENT, AND/OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITH NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.

WIRING & RACEWAY:

1. THE DRAWINGS SHOW THE GENERAL LAYOUT AND TYPICAL DETAILS. PROVIDE COMPLETE SYSTEMS. DRAWINGS ARE BASED ON THE SPECIFIED EQUIPMENT. RACEWAY LAYOUTS, BOXES, AND WIRING OF THE SYSTEMS ARE SUBJECT TO APPROVED SHOP DRAWINGS.
2. ENSURE THAT ITEMS TO BE FURNISHED FIT THE SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS, AND PROVIDE SUCH SIZES AND SHAPES OF EQUIPMENT THAT FINAL INSTALLATION SHALL SATISFY THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
3. LOCATIONS OF OUTLETS, SWITCHES, APPLIANCES, ETC. AS SHOWN ON TELECOMMUNICATIONS PLANS ARE APPROXIMATE COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS AND DETAILS, AND WITH JOB CONDITIONS.
4. LOCATE AND INSTALL TELECOMMUNICATIONS EQUIPMENT, JUNCTION AND PULL BOXES, CONTROLS, AND OTHER APPARATUS REQUIRING MAINTENANCE, INSPECTION, AND OPERATION SO AS TO BE READILY ACCESSIBLE.

RACEWAY INSTALLATION:

1. IN ALL ARCHITECTURALLY FINISHED SPACES, CONDUITS AND CABLES SHALL BE RUN CONCEALED IN FURRING OR FURRED CEILINGS, SLABS, MASONRY, AND PARTITIONS UNLESS OTHERWISE INDICATED. SAW CUTTING AND FINISHED PATCHING SHALL BE REQUIRED IN EXISTING SLABS AND MASONRY WALLS. IN UNFINISHED SPACES, RACEWAYS MAY BE RUN EXPOSED.
2. UNLESS OTHERWISE INDICATED, EXACT ROUTING OF RACEWAYS SHALL BE DETERMINED BY THE CONTRACTOR TO SUIT PROJECT REQUIREMENTS AND FIELD CONDITIONS.
3. PROVIDE SEPARATE RACEWAYS, JUNCTION BOXES, PULL BOXES AND WIREWAYS FOR ALL EMERGENCY SYSTEM WIRING.

GROUNDING INSTALLATION:

1. EQUIPMENT GROUNDING

A. INSTALL AN INSULATED GROUND CONDUCTOR, RUN IN THE RACEWAY WITH THE PHASE CONDUCTORS, FOR EACH FEEDER SERVING: PANELBOARDS, LIGHTING DIMMER BOARDS, MOTOR CONTROL CENTERS, MOTORS, EQUIPMENT AND APPLIANCES UNLESS OTHERWISE NOTED.

B. INCLUDE AN INSULATED GROUND CONDUCTOR IN ALL CONDUIT RUNS CONTAINING SECTIONS OF FLEXIBLE CONDUIT UNLESS OTHERWISE NOTED.

C. INCLUDE AN INSULATED GROUND CONDUCTOR IN ALL BRANCH CIRCUIT RACEWAYS OR CABLES UNLESS OTHERWISE NOTED.

2. TELECOMMUNICATIONS CLOSET GROUNDING

A. PROVIDE A #4 AWG GROUND CONDUCTOR RISER IN 1 EMT CONDUIT TO EACH TELECOMMUNICATIONS CLOSET GROUNDING BUSBAR (TGB) FROM THE TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB), AND TO MAIN SERVICE GROUNDING ELECTRODE SYSTEM.

B. CONNECT THE GROUND RISER TO TMGB AND TGBS PER TIA/EIA STANDARD 607 - 1994.

C. PROVIDE ADDITIONAL #4 AWG GROUND CABLE CONNECTIONS FROM EACH TMGB AND TGB TO THE CLOSEST BUILDING STEEL AND TO THE GROUND BUS IN THE ELECTRIC PANEL FEEDING THE OUTLETS AND EQUIPMENT IN THE ASSOCIATED TELECOMMUNICATIONS ROOM/CLOSET.

3. GROUND EACH TELECOMMUNICATIONS, FIRE ALARM, SECURITY, AND BMS SYSTEM EQUIPMENT AND CONTROL PANEL WITHIN EACH TELECOMMUNICATIONS ROOM/CLOSET TO THE ASSOCIATED CLOSET TMGB OR TGB WITH A #4 AWG CONDUCTOR PER TIA/EIA STANDARD 607 - 1994.

RACEWAYS FOR TELECOMMUNICATION SYSTEMS:

1. PROVIDE CONDUIT SYSTEMS FOR TELECOMMUNICATION WORK, COMPLETE WITH PULL BOXES, OUTLET BOXES, AND CONDUIT AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS. REFER TO SECTIONS 260533 'RACEWAY AND BOXES'; 262726 'WIRING DEVICES' AND 271500 'COMMUNICATIONS HORIZONTAL CABLING' FOR TELECOMMUNICATIONS SYSTEM WIRING, OUTLETS, AND COVER PLATES.
2. PROVIDE MINIMUM INSIDE BENDING RADIUS OF 10 TIMES CONDUIT INSIDE DIAMETER FOR TELECOMMUNICATIONS RACEWAYS.
3. WHEN COMPLETED THE CONDUIT SYSTEMS SHALL HAVE ALL CABLING INSTALLED FROM DEVICES TO I.T. CLOSET #108. TERMINATIONS AT NETWORK RACK WILL BE DONE BY OWNER/OWNER'S NETWORK INSTALLER.
4. FROM EACH OUTLET CONTRACTOR SHALL TERMINATE CABLE AT DEVICES AND RUN BACK TO I.T. CLOSET #108. REFER TO PLANS AND DETAILS FOR MORE INFORMATION.
5. ALL TELECOMMUNICATIONS OUTLETS SHALL BE INSTALLED IN A 4 SQUARE BOX WITH A SINGLE GANG MUD RING UNLESS OTHERWISE NOTED.
6. E.C. SHALL LOCATE OVERHEAD PROJECTOR OUTLET/CABLE APPROXIMATELY 14'-0" BACK FROM THE CENTER OF THE DISPLAY WALL.

COORDINATION DRAWINGS:

1. DEVELOP AND SUBMIT COORDINATION DRAWINGS AS OUTLINED.

A. SHEET METAL, PLUMBING AND FIRE PROTECTION SHOP DRAWINGS THAT HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER REVIEWED OR FURNISH AS CORRECTED PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS.

B. AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVISED PER ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE OTHERS TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THEIR WORK:

-MECHANICAL SHEET METAL
-PLUMBING CONTRACTOR
-ELECTRICAL WORK
-MECHANICAL PIPING
-SPRINKLER PIPING
-TELECOMMUNICATIONS WORK

2. AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWINGS AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWING IS RESPONSIBILITY OF CWTTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.
3. THE ARCHITECT AND ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE FOR NOTED CONFLICTS ONLY. COORDINATION DRAWINGS ARE NOT TO BE CONSIDERED PIPING OR DUCT SHOP DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT INDIVIDUAL PIPING AND DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. PIPING AND DUCTWORK SHOP DRAWINGS SHALL FOLLOW THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.
4. SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW COORDINATION DRAWINGS FRO GENERAL ARRANGEMENT AND FOR NOTED CONFLICTS ONLY. SPECIFIC INSTALLATION REQUIREMENTS WILL BE REVIEWED ONLY IN INDIVIDUAL TRADE SHOP DRAWINGS.
5. ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES WHICH IS DEEMED TO BE IN CONFLICT WITH COORDINATION DRAWINGS SHALL BE REMOVED AND RE-INSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.
6. EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.
7. THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR CLEARLY IDENTIFIED CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

COMMUNICATIONS/SECURITY LEGEND

(NOT ALL SYMBOLS ARE USED)

▽	TELEPHONE JACK LOCATION. PROVIDE 4" SQUARE BOX, 1-GANG RING AND 1 CONDUIT TO 6" ABOVE ACCESSIBLE CEILING.
▽ 1/2	FLUSH OUTLET BOX FOR WALL MOUNTED TELEPHONE, MOUNTED 48" AFF OR AT HEIGHT INDICATED ON PLAN WITH 1" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING.
▼ DX	DATA OUTLET, 4" X 4" OUTLET BOX WITH A 1-GANG COVER, MOUNT 18" AFF OR AT HEIGHT INDICATED ON PLAN WITH 1" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING. DX = NUMBER OF DATA OUTLETS.
▼ V/DX	VOICE/DATA OUTLET, 4" X 4" OUTLET BOX WITH A 1-GANG COVER, MOUNT 18" AFF OR AT HEIGHT INDICATED ON PLAN WITH 1" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING. V/X/DX = NUMBER OF VOICE/DATA PORTS.
▼ AV	AUDIO/VISUAL OUTLET, 4" X 4" OUTLET BOX WITH A 2-GANG COVER, MOUNT 18" AFF OR AT HEIGHT INDICATED ON PLAN WITH (2) 1"Ø CONDUITS TO 6" ABOVE ACCESSIBLE CEILING. COORDINATE OUTLET & CABLING REQUIREMENTS (HDMI, VGA, AUDIO, ETC.) WITH OWNER
▼ AV	FLUSH CEILING MOUNTED AUDIO/VISUAL OUTLET. PROVIDE 4" X 4" OUTLET BOX WITH A 2-GANG MUD RING AND COVER. COORDINATE OUTLET & CABLING REQUIREMENTS (HDMI, VGA, AUDIO, ETC.) WITH OWNER
▼ TV	TV COAXIAL JACK LOCATION. PROVIDE NEW JACK & COAXIAL CABLE TO HEADEND EQUIPMENT ALONG WITH ADJACENT DUPLEX RECEPTACLE. COORDINATE REQUIREMENT OF JACK & CABLE WITH OWNER AND SYSTEM INSTALLER. SEE ALSO CATV SYSTEM NOTES AND DETAIL ON DRAWING E401
S	6" RECESSED CEILING SPEAKER WITH RECESSED VOLUME CONTROL. BOSEN #S8.0T*T2SPSBLVR
S IC	10" DIA SURFACE MOUNTED HIGH VOLUME LOUDSPEAKER, SOUNDSPHERE #QI-6
	WALL MOUNTED INDOOR/OUTDOOR HORN TYPE LOUDSPEAKER. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS. BOSEN #SPTSA
	SINGLE GANG VOLUME CONTROL SWITCH. MOUNT AT 48" AFF. BOSEN #ATIOA
M	INTERCOM MASTER CONTROL STATION
S	INTERCOM REMOTE STATION 'SLAVE'
● CCTV	CEILING MOUNTED DOME TYPE SECURITY CAMERA (CONTRACTOR SHALL INSTALL CAT 6 CABLE FROM CAMERA BACK TO I.T. CLOSET #108)
●→ CCTV	WALL/ARM MOUNTED DOME TYPE SECURITY CAMERA. 'WP' INDICATES WEATHERPROOF EXTERIOR CAMERA (CONTRACTOR SHALL INSTALL CAT 6 CABLE FROM CAMERA BACK TO I.T. CLOSET #108)

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AWG	AMERICAN WIRE GAUGE
C	CONDUIT(S)
DEMARC	DEMARCATION
EMT	ELECTRICAL METALLIC TUBING
LAN	LOCAL AREA NETWORK
MER	MAIN EQUIPMENT ROOM
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
PA	PUBLIC ADDRESS
PBX	PRIVATE BRANCH EXCHANGE
PC	PERSONAL COMPUTER
POE	POWER OVER ETHERNET
PP	PATCH PANEL
PVC	POLYVINYL CHLORIDE CONDUIT (PLASTIC)
QYT	QUANTITY
STP	SHIELDED TWISTED PAIR
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TGB	TELECOMMUNICATIONS GROUNDING BUSSBAR
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSSBAR
TR	TELECOMMUNICATIONS ROOM
TV	TELEVISION
TYP	TYPICAL
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
VGA	VIDEO GRAPHICS ARRAY
VOIP	VOICE OVER INTERNET PROTOCOL
W	WALL TELEPHONE (VOICE)
WAN	WIDE AREA NETWORK
WAO	WORK AREA OUTLET
WAP	WIRELESS ACCESS POINT (DATA)
WG	WIRE GUARD
WP	WEATHERPROOF

COMMUNICATIONS/SECURITY DRAWING LIST

DRAWING NUMBER	DRAWING DESCRIPTION
T001	TECHNOLOGY SYMBOLS, NOTES & ABBREVIATIONS
T101	MAIN LEVEL TECHNOLOGY PLAN
T102	MECHANICAL MEZZANINE TECHNOLOGY PLAN
T201	TECHNOLOGY ONE LINE DIAGRAM & DETAILS

Project Title:
Town of North Stonington
New Center for Emergency Services
25 Rocky Hollow Road
North Stonington, Connecticut 06359

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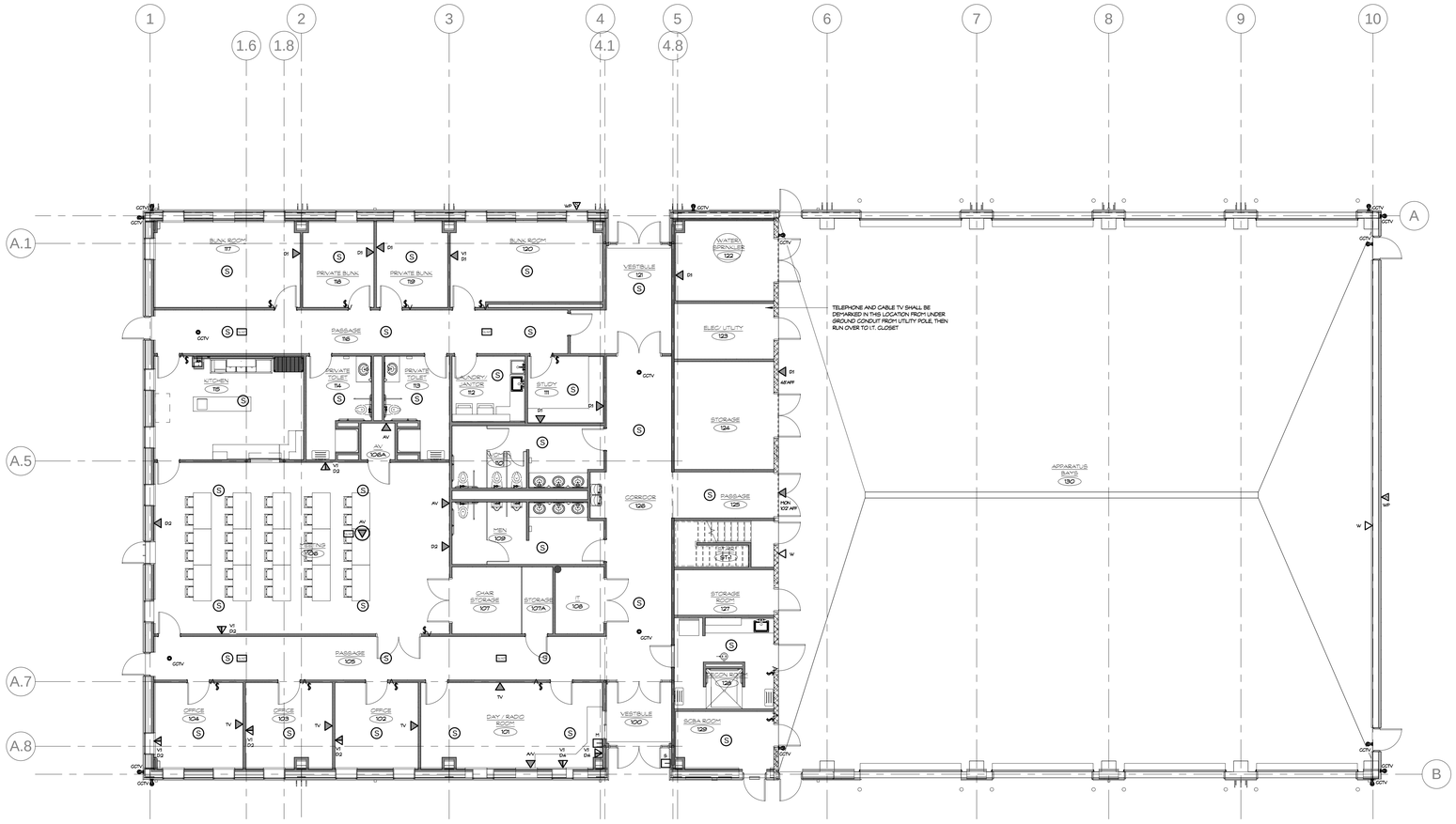
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
TECHNOLOGY SYMBOLS, NOTES & ABBREVIATIONS

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: SEC
Project Number: 13.220

Drawing Number: T001



1 MAIN LEVEL TECHNOLOGY PLAN
T101 SCALE: 1/8" = 1'-0"

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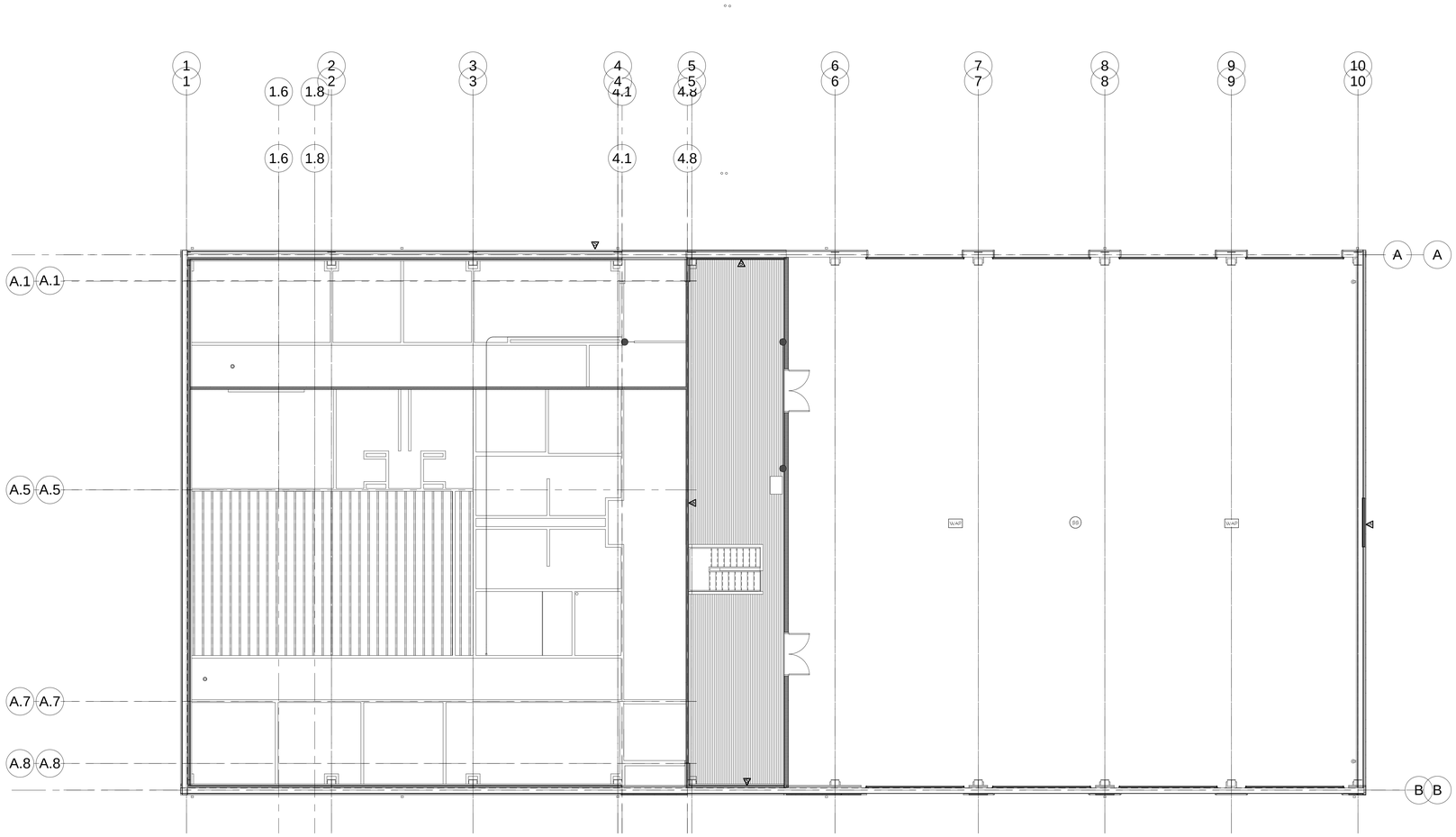
Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MAIN LEVEL TECHNOLOGY PLAN

100% CD Submission

Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: SEC
Project Number: 13.220

Drawing Number: T101



1 T102 MECHANICAL MEZZANINE TECHNOLOGY PLAN
SCALE: 1/8" = 1'-0"

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Revision:	Description:	Date:	Revised By:
REV 1	100% CD Submission	1/5/17	
REV 2	Issued for Bidding	2/10/17	

Drawing Title:
MECHANICAL MEZZANINE TECHNOLOGY PLAN

100% CD Submission

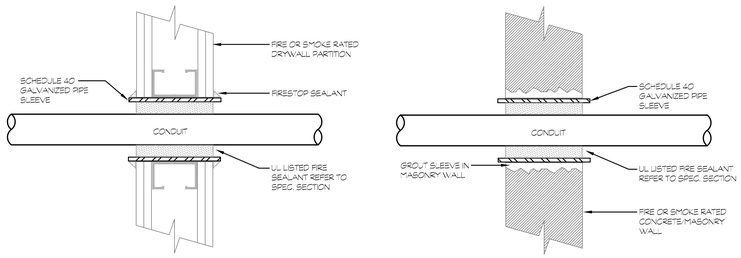
Date: 12/1/16
Scale: 1/8" = 1'-0"
Drawn By: SEC
Project Number: 13.220

Drawing Number: T102

GENERAL NOTES:

PROVIDE UL LISTED FIRE/SMOKE PENETRATION ASSEMBLY IN ACCORDANCE W/ UL1479, ASTM E814 REQUIREMENTS FOR WALL TYPE, RATING, PIPE SIZE INSTALLED.

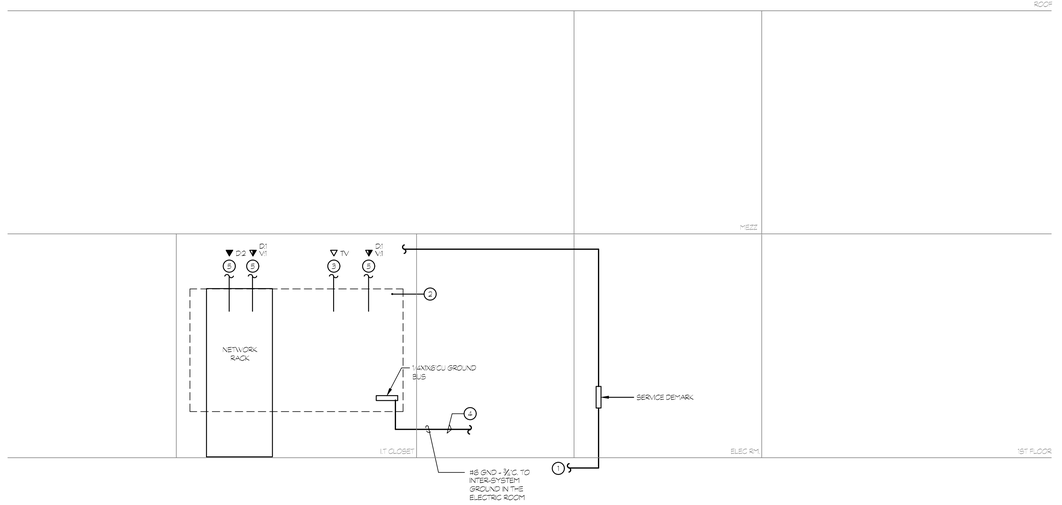
FIRE STOPPING SHALL HAVE A RATING EQUAL TO OR GREATER THAN THE WALL BEING PENETRATED - SEE SPECIFICATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR WALL RATINGS AND LOCATIONS.



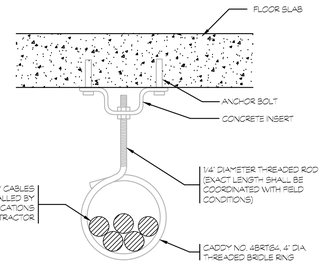
WALL PENETRATION W/FIRE-SMOKE SEAL DETAIL
NTS

NOTES:

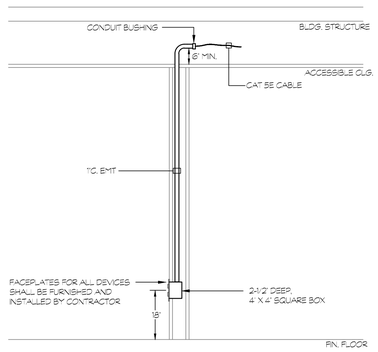
1. (2) 4" CONDUITS FROM UTILITY POLE AT ROUTE 2 TO DEMARK EQUIPMENT IN ELECTRIC ROOM. CONDUITS SHALL BE STUBBED UP IN ROOM WHERE INDICATED ON DRAWING E201. REFER TO DRAWING E203 FOR ROUTING OF CONDUIT ON SITE.
2. 4' X 4' X 3/4" BLACK PAINTED FIRE RATED PLYWOOD BACKBOARD ON TWO WALLS REFER TO DWG. T101.
3. PROVIDE RG6 TEFLON CABLE W/8 BLACK AT EACH END WITH F CONNECTORS FROM MTB TO THE TV OUTLETS.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE INTERSYSTEM GROUND DEVICE AT SERVICE ENTRANCE GROUND AND RUN GROUND WIRE AND CONDUIT TO MAIN TELEPHONE SERVICE.
5. PROVIDE CAT5e CABLE FROM EACH JACK LOCATION TO PUNCH DOWN BLOCKS AND/OR PATCH PANELS I.T. CLOSET #108. JACK & CABLE QUANTITY SHALL BE AS INDICATED BY V (VOICE) AND D (DATA) NUMBERS AT EACH LOCATION.
6. AT EACH PHONE/TERMINAL LOCATION PROVIDE A JUNCTION BOX IN WALL WITH 1 CONDUIT STUB (6') ABOVE FINISH CEILING.



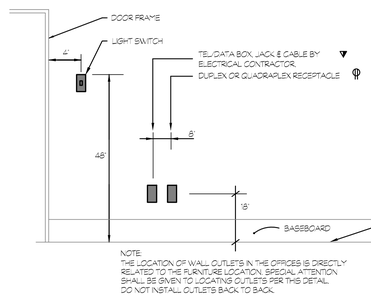
COMMUNICATION RISER DIAGRAM
NTS



CABLE RING DETAIL
NTS

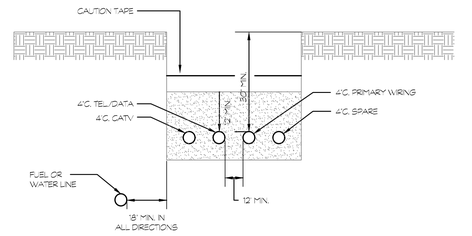


VOICE / DATA / AV OUTLET INSTALLATION DETAIL
NTS



NOTE:
THE LOCATION OF WALL OUTLETS IN THE OFFICES IS DIRECTLY RELATED TO THE FURNITURE LOCATION. SPECIAL ATTENTION SHALL BE GIVEN TO LOCATING OUTLETS PER THIS DETAIL. DO NOT INSTALL OUTLETS BACK TO BACK.

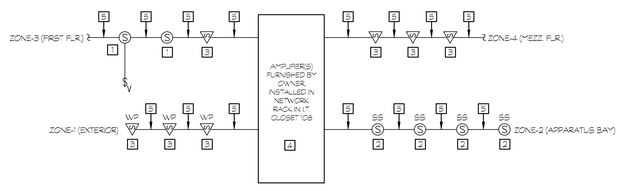
OUTLET MOUNTING DETAIL
NTS
(TYP. ALL OUTLETS UNLESS OTHERWISE NOTED.)



INSTALLATION IN TRENCH
- ALL CONDUIT SHALL BE INSTALLED AT A DEPTH OF AT LEAST 30" IN THE FOLLOWING ORDER.

1. ENSURE THAT THE BOTTOM OF THE TRENCH IS WELL-TAMPED AND FREE OF ROCKS.
2. INSTALL THE CONDUIT.
3. INSTALL OTHER UTILITY CABLES OR CONDUITS IN THE TRENCH.
4. BACKFILL WITH 12 INCHES OF SAND.
5. INSTALL CABLE WARNING TAPE 12 INCHES OVER THE CONDUIT.
6. FILL IN THE REMAINDER OF THE TRENCH WITH NATIVE BACKFILL.

TRENCH DETAIL
NTS



PA NOTES:

1. SPEAKER SHALL BE RECESSED IN CEILING WITH TILE BRIDGE AND BACK BOX (TYPICAL. REFER TO PLANS FOR QUANTITY)
2. SPEAKER SHALL BE SURFACE MOUNTED (REFER TO PLANS FOR QTY.)
3. SPEAKER SHALL BE WALL MOUNTED. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS (TYPICAL. REFER TO PLANS FOR QUANTITY)
4. TERMINATIONS AND PROGRAMING WITHIN PA SYSTEM EQUIPMENT SHALL BE PERFORMED BY AN AUTHORIZED & CERTIFIED REPRESENTATIVE. RADIO COMMUNICATION EQUIPMENT FURNISHED BY OTHERS.
5. ALL HOMERUNS SHALL BE ROUTED BACK TO PA SYSTEM EQUIPMENT IN I.T. CLOSET #108. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL SPEAKERS, SWITCHES AND WIRING (18/2).

PA SYSTEM RISER DIAGRAM
NTS

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Drawing Title:
TECHNOLOGY ONE LINE DIAGRAM & DETAILS

100% CD Submission

Date: 12/1/16
Scale: NONE
Drawn By: SEC
Project Number: 13.220

Drawing Number: T201